DOCUMENT RESUME

ED 259 181 CE 041 903

TITLE What to Do Regarding Feeding and Nourishing the Family.
INSTITUTION Ohio State Dept. of Education, Columbus. Div. of Vocational Education.; Ohio State Univ., Columbus. Instructional Materials Lab.
PUB DATE Aug 83
NOTE 352p.; For related documents, see CE 041 900-906.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC15 Plus Postage.
DESCRIPTORS Behavioral Objectives; Consumer Education; Curriculum Guides; Family Life Education; *Food; Food Service; *Home Economics; *Homemaking Skills; *Home Management; Hunger; Learning Activities; Learning Modules; *Nutrition; Nutrition Instruction; Secondary Education; World Problems

ABSTRACT

These materials for the curriculum area of feeding and nourishing the family comprise one of six such packages that are part of the Ohio Vocational Consumer/Homemaking Curriculum Guide. The curriculum area or perennial problem taken up in this document is divided into four practical problems about what to do: (1) to be well-nourished; (2) as a world citizen; (3) regarding psychological and social needs; and (4) regarding the management of food resources. These are further categorized into eight concerns: nutritional needs, individual problems, world food supply, political and economic policies, food and social interaction, cultural value of food, procurement, and meal management. Each concern is divided into a number of concepts or modules. This package consists of 29 modules. The format for each module is as follows: code, perennial problem, practical problem, concern/concept, homemaking skills (listing of various skills needed by the homemaker as related to the developed concepts), and a chart relating process skills (steps of practical reasoning), concepts (further breakdown of the topic), and strategies (information and activities that facilitate the teaching/learning of the concepts). In some cases, specific resources are attached; otherwise, teachers may choose their own resources based upon availability and appropriateness to individual classrooms. (YLB)

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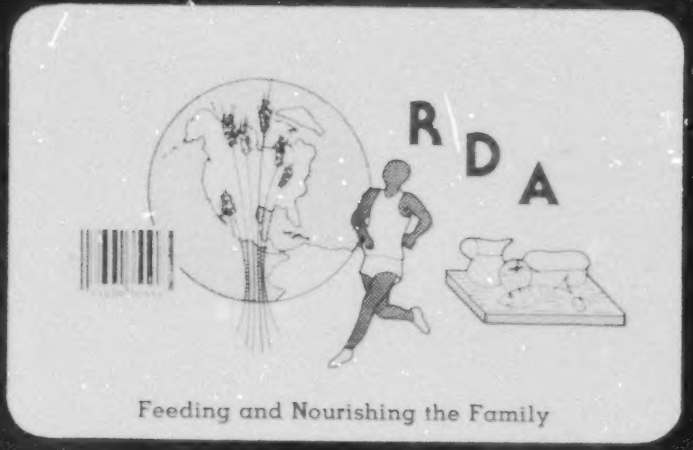
WHAT TO DO REGARDING FEEDING AND NOURISHING THE FAMILY

ED259181



Feeding and Nourishing the Family

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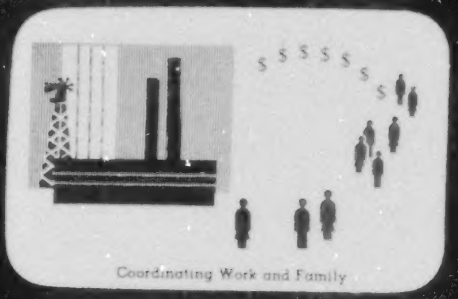

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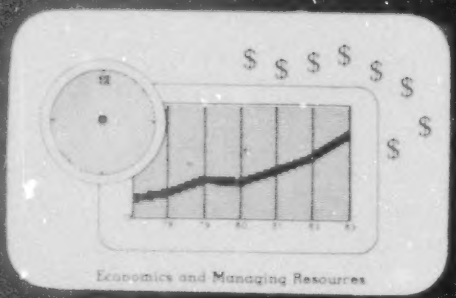

Economics and Managing Resources

Personal and Family Textile Needs

Creating a Living Environment

CE 041 903

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INTRODUCTION

The practical reasoning approach brings a new dimension to the teaching of foods and nutrition. Traditional emphasis has been placed on identifying elements of nutrition and applying them to meal planning. The practical reasoning approach first involves the student in asking the question, "Am I obligated to be well nourished? What should I do regarding feeding and nourishing the family?" After the alternatives and consequences are examined, then knowledge and skill development continue.

The problem approach is an integrated one, involving student values, basic nutrition knowledge and diet planning. Problems include those of concern to adolescents - weight, sports nutrition and anorexia. This curriculum encourages students to constantly ask how their actions affect others; thus, the emphasis on world food supply and political and economic policies.

Another area of feeding and nourishing the family which has not received as much emphasis in the past is the psychological, social and cultural meanings of foods. Food plays a major role in our lives and is imbued with social and cultural meaning. Many of us picture our family around the dinner table. This curriculum helps students examine the meaning of food in their lives.

The final practical problem areas regard management of food resources. Should I produce or grow my own food? When? How? These and many other questions are raised. There is strong emphasis on skill development -- consumer skills, health and safety practices, resource management, buying and caring for equipment, menu planning and food preparation.

Technology is producing new discoveries in nutrition, foods and equipment. New software programs are being produced for computers in the area of foods and nutrition. Current data and resources should supplement the curriculum.

HOMEMAKING SKILLS

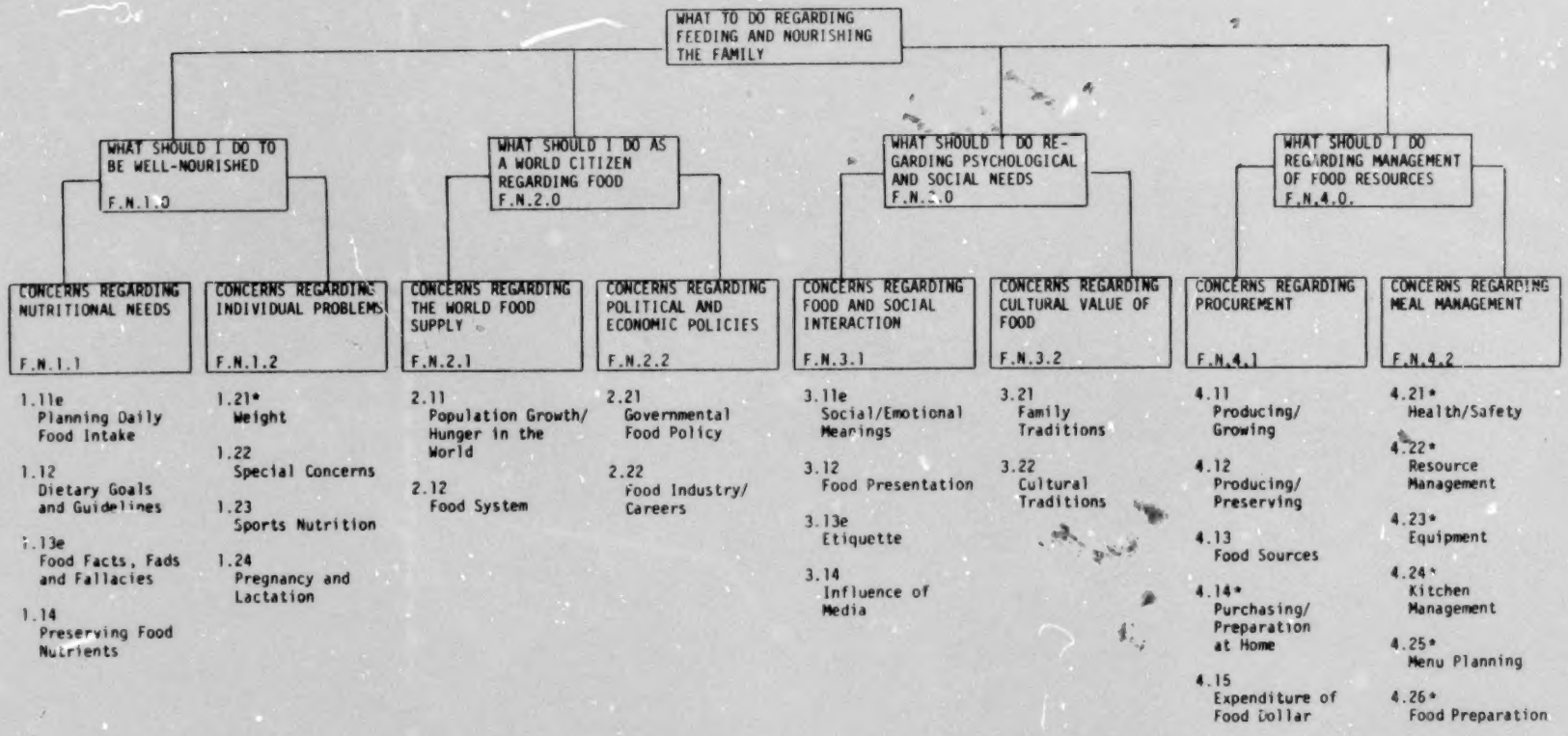
Homemaking skills which are essential for performance of the following homemaking tasks are developed in the modules in Feeding and Nourishing the Family.

Meeting Nutritional Needs

- Evaluate nutritional needs of family members
- Identify nutritional components of food
- Make a shopping list
- Plan food budget
- Plan meals and snacks according to nutritional needs and family preferences
- Prepare meals
- Purchase groceries
- Read and utilize cookbooks
- Store and handle food safely and properly
- Teach nutrition to family members

Planning for Social Events and Entertaining

- Budget money for social activities
- Celebrate special occasions
- Determine type of gathering
- Entertain business associates
- Entertain guests in the home
- Make plans for entertaining
- Plan food for special events
- Plan recreational and social activities
- Use socially acceptable etiquette


WHAT TO DO REGARDING FEEDING AND NOURISHING THE FAMILY
WHAT SHOULD I DO TO BE WELL-NOURISHED F.N.1.0
WHAT SHOULD I DO AS A WORLD CITIZEN REGARDING FOOD F.N.2.0
WHAT SHOULD I DO REGARDING PSYCHOLOGICAL AND SOCIAL NEEDS F.N.3.0
WHAT SHOULD I DO REGARDING MANAGEMENT OF FOOD RESOURCES F.N.4.0.
CONCERNS REGARDING NUTRITIONAL NEEDS F.N.1.1
CONCERNS REGARDING INDIVIDUAL PROBLEMS F.N.1.2
CONCERNS REGARDING THE WORLD FOOD SUPPLY F.N.2.1
CONCERNS REGARDING POLITICAL AND ECONOMIC POLICIES F.N.2.2
CONCERNS REGARDING FOOD AND SOCIAL INTERACTION F.N.3.1
CONCERNS REGARDING CULTURAL VALUE OF FOOD F.N.3.2
CONCERNS REGARDING PROCUREMENT F.N.4.1
CONCERNS REGARDING MEAL MANAGEMENT F.N.4.2
1.11e Planning Daily Food Intake
1.12 Dietary Goals and Guidelines
1.13e Food Facts, Fads and Fallacies
1.14 Preserving Food Nutrients
1.21* Weight
1.22 Special Concerns
1.23 Sports Nutrition
1.24 Pregnancy and Lactation
2.11 Population Growth/ Hunger in the World
2.12 Food System
2.21 Governmental Food Policy
2.22 Food Industry/ Careers
3.11e Social/Emotional Meanings
3.12 Food Presentation
3.13e Etiquette
3.14 Influence of Media
3.21 Family Traditions
3.22 Cultural Traditions
4.11 Producing/ Growing
4.12 Producing/ Preserving
4.13 Food Sources
4.14* Purchasing/ Preparation at Home
4.15 Expenditure of Food Dollar
4.21* Health/Safety
4.22* Resource Management
4.23* Equipment
4.24* Kitchen Management
4.25* Menu Planning
4.26* Food Preparation

PERENNIAL PROBLEM — What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM — What Should I Do To Be Well Nourished?

CONCERN/CONCEPT — Nutritional Needs/Planning Daily Food Intake

HOMEMAKING SKILLS

- Relate values and food choices
- Identify nutritional components of food

PROCESS SKILLS	CONCEPTS	STRATEGIES
3.	Values and food choices	Using pictures of food, respond to these questions. How many of you would -- eat this food even if you did not like it? -- never eat this food? -- eat this food once a week? -- buy it at any price? -- serve it to a friend? -- eat it only if a parent told you to? As a class discuss what factors affected responses. (Personal preference, habit, cost, peer pressure, health.) Write or draw on chart paper or the board open-ended responses to these two questions. -- When I think of food I ... -- I think nutrition is ... Do *Nutrition Scoreboard and discuss answers.
	Characteristics of well nourished persons	Develop a class definition of a well nourished and poorly nourished person. Use resources to define characteristics.

PROCESS SKILLS	CONCEPTS	STRATEGIES
PROBLEM	Characteristics of well nourished persons (continued)	Write a short response to the question: "Am I obligated to be well nourished?". Share with class. Save this response for later use.
	Basic 4 Sources and functions of nutrients	Do pretest to assess level of nutrition knowledge. Review as needed: Basic 4, sources and functions of nutrients, process by which body absorbs food.
	Digestive process	Make flash cards, do word find puzzles or a computer drill program to review basic nutrition facts.
		Using Dairy Council comparison cards or a reference listing the nutritive values of foods, develop a chart to identify major sources for each nutrient.
		Given pictures of foods: 1) rate them as high, medium or low nutritive value and 2) identify the chief nutrients.
		IEE - Do nutrient comparisons of a group of foods: cereals, canned vegetables, canned fruits. Use labels for information. Share with class.
		Do a food diary for 48 hours. Use a computer simulation program to determine nutritional adequacy or compare to Basic 4 categories and to the RDA chart. If your diet was lacking basic nutrients, revise it to be nutritionally adequate.
	Calories	Using resources, define calories and determine caloric requirements. Do *Come On Down activity sheet to estimate caloric value of foods.
		Assign small groups a calorie range (0-35, 36-65, 66-100, 101-150). Using a calorie chart, list the major types of foods in each group. Compile and copy for student notebooks.
	Snacks	Using resources, list ten "good" snacks and ten "poor" snacks. Identify nutrients which are supplied or lack[illegible]. Can nutritious snacks substitute for a meal?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Snacks (continued)	Plan a laboratory to prepare a nutritious snack. Set up a criteria for evaluating the snacks. Discuss how the snack may contribute to total day's nutritive intake.
	Nutrition education project	FHA/HERO - Plan a nutrition education project for preschool or elementary age children. Consider posters, nutrition games, skits, demonstrations, food samples. FHA/HERO - Use *Breakfast Bingo as an activity for FHA/HERO meeting or activity.
5. PR	Family food habits	In small groups develop short descriptions of families with different food eating patterns. Consider family customs - always having pizza on Saturday, Sunday brunch versus large dinner. Analyze the nutritional implications of each family food pattern. Using the practical reasoning process, determine what you should do if your family is not interested in good nutrition. Brainstorm alternatives. Carefully think through the consequences. Create a way to overcome the consequences. IEE - Plan menus and analyze nutritive value for your family.
	Personal food habits	As a class, develop a list of poor food habits. -- Snacking on junk food. -- Drinking soda pop. -- Eating because you are angry or upset. -- Eating heavy meals and not exercising. -- Always eating dessert. -- Not exercising. -- Eating while watching television. -- Eating fast. -- Using extra sugar, catsup, mayonnaise. -- Eating hamburgers and french fries three times a week. Individually rank order the poor habits in terms of frequency (the first one is the one you are most likely to do).

PROCESS SKILLS	CONCEPTS	STRATEGIES
6.	Personal food habits (continued)	Using the practical reasoning process, generate alternatives and consequences for your three worst food habits. Decide and test your decision. Complete a chart titled "What should I do to be well nourished?".

ALTERNATIVE	CONSEQUENCE	DECISION	TEST	PLAN OF ACTION
a) Continue poor habit			What if everyone did it?	
b) Improve poor habit			Would I advise my best friend to do this?	

Revise response to question asked at the beginning of module: "Am I obligated to be well nourished?". Did your response change? In what ways? Do you have factual reasons to support your decision?

NUTRITION SCOREBOARD

FN 1.11e

TRUE	FALSE	I AM NOT SURE	ANSWER EACH QUESTION IN SCOREBOX TO THE LEFT. PLEASE DO NOT GUESS. (ANSWERS FOLLOW ON NEXT PAGE)
			1. The kinds and amounts of food that we eat each day affect how we look and feel, as well as how healthy we are.
			2. Even if we eat many healthful foods each day, taking extra vitamin pills would make us more healthy.
			3. Calories from candy and doughnuts are more likely to make us gain weight than the same number of calories from apples and lettuce.
			4. Many lower cost foods can be just as nutritious (healthful) as ones that cost more.
			5. We can eat snack foods that will improve our diet.
			6. The way we store and cook our food can make a difference in how nutritious it is.
			7. Athletes need more protein than non-athletes.
			8. Eating in the morning is not too important as long as we eat healthful foods later in the day.
			9. When our bodies are growing, we need more protein, vitamins, minerals and energy foods for our size than we will after we stop growing.
			10. Reading nutrition labels on food packages can help us choose more nutritious foods for the money we spend.

Source: Minnesota FHA/HERO "Student Body Handbook".

ANSWERS TO NUTRITION SCOREBOARD

1. TRUE — Eating enough (but not too much) of many different nutritious foods can help us look and feel good.

2. FALSE — If we are healthy, eating a nutritious diet each day should give us all the vitamins, minerals and protein we need without taking vitamins or other pills. Too much of some vitamins can be harmful.

3. FALSE — A calorie (a unit of heat energy) from one food is the same as a calorie from another food. Some foods do contain more calories per ounce, but a calorie is a calorie, wherever we find it.

4. TRUE — Cost is not related to how nutritious a food is. Choosing foods carefully for the nutrients they provide can help us stretch our food dollars. (Nutrients are substances our bodies must have, like protein, vitamins, minerals and water.)

5. TRUE — Snacks are often "empty calorie" foods that have few if any nutrients except energy value. We can choose snacks that are both healthful and fun to eat.

6. TRUE — If we store food a long time, it usually will be less nutritious. Heat, air, light or long cooking can destroy some nutrients.

7. FALSE — Many people believe this is true, but unless an athlete is developing new muscles, he or she does not need any extra protein. Extra calories will be needed to supply the additional energy athletes need, but eating extra protein is an expensive way to get more calories.

8. FALSE — Studies show that not eating in the morning often causes more accidents, less learning and poorer work due to the very long time without food.

9. TRUE — Babies, children, teens and pregnant women all need more nutrients for their size because they are growing.

10. TRUE — Reading nutrition labels, which are on some food packages, can help us to compare nutrients in different foods.

Source: Minnesota FHA/HERO "Student Body Handbook".

FN 1.11e

COME ON DOWN

A calorie counting game! Similar to The Price Is Right!

Things you need:
- 3 chairs
- 3 contestants
- 1 host or hostess
- 3 markers (pens)
- 3 sheets of paper
- food items (know the amount of calories in them)

Start the game by saying "John (or Jane) Doe come on down". The first contestant then rushes down and sits in a chair. Continue calling people down until you have three contestants seated. Then say "the first food item up for calorie count is (example) a Big Mac". Have each contestant write down on the paper the number of calories they think is in the Big Mac. (The audience could get involved too by yelling out their guesses). Keep answers a secret. Then have each contestant hold up their card/paper. The contestant that comes closest to the real number of calories with out going over is the preliminary winner. Continue playing with different food items. Remember to call down new people!

There will be five rounds, so five preliminary winners will advance to championship round.

Options to Find Winners

* For this round each gets 10 seconds to guess correct number in food. Use higher-lower gimmick. Eliminate if cannot get correct number in 10 seconds.
* 1,000 calories to spend. One who stays under but still has Basic 4 in choice. Use food models.
* 5 food model - Right price -- give them 5 calorie amounts -- place right number of calories. Give 15 seconds -- then can change.

CALORIE GUESSING GAME

How many calories in:

1.	One dill pickle (4 x 1 3/4)?	15___	30___	50___
2.	Carbonated cola type beverage (8 oz.)?	50___	95___	125___
3.	Popcorn popped with oil (1 cup)?	35___	65___	80___
4.	Mayonnaise (1 tablespoon)?	60___	80___	110___
5.	Orange (2 4/5 inch diameter)?	60___	80___	110___
6.	Milk, whole (1 cup)?	120___	160___	180___
7.	Milk, skim (1 cup)?	60___	90___	110___
8.	Potatoes, baked (1 potato)?	90___	120___	155___
9.	Potatoes, french fried (10 pieces)?	90___	120___	155___
10.	Beans, green snap (1 cup)?	30___	75___	110___
11.	Cantaloupe (1/2)?	60___	80___	120___
12.	Peach, raw (2 inch diameter)?	35___	75___	110___
13.	Cake, chocolate (1/16 inch)?	150___	240___	350___

ANSWERS: 1. 15 2. 95 3. 65 4. 110 5. 60 6. 160 7. 90 8. 90 9. 155 10. 30 11. 60 12. 35 13. 350

Source: Minnesota FHA/HERO "Student Body Handbook".

DIRECTIONS: When given the starting signal, find people who fulfill the requirements in one box below. Have the person sign their name in that box. Once the person has signed your sheet they cannot be asked to sign a second box. When you have a straight line through six adjacent boxes, you have "bingo". To qualify as a winner, stand and hold this paper in outstretched arms above your head.

Daily eats at least 400 calories for breakfast	Drinks real (100%) orange juice	Eats at least 12 grams of protein for breakfast each day	Plans breakfast before going to bed each night	Brushes teeth after breakfast -- regularly
Chooses not to use caffeine products for breakfast	Does not add salt to breakfast foods	Has not watched T.V. before or during breakfast for 2 weeks	Consumes at least ½ serving from each of the 4 food groups for breakfast	Uses more than 3 varieties of breakfast menus each week
Has not eaten a donut or danish for at least 6 months	Eats quality food for breakfast, but untypical breakfast foods	Drinks at least 8 oz. of plain water before, during and after breakfast	Believes that eggs are healthful for the low stressed, active person	Consumes a low fat, low sugar breakfast
When eating breakfast out, makes specific healthful requests about food preparation	Has not skipped a substantial breakfast for 2 months	Does not feel/get hungry before lunch	Uses apple butter instead of butter, syrup or jelly on most breakfast foods	Has not used vitamin pills for 5 years
Consumes meat (flesh products) less than once per month for breakfast	Uses no butter/ margarine on bread, toast, muffins, etc.	Uses whole grain products 80% of time for breakfast	Has not used a breakfast cereal with more than 10% sugar for 2 years	Eats yesterday's leftovers from lunch/dinner for breakfast

Source: Jack D. Osman, Towson State University, Towson, MD 21204.

PERENNIAL PROBLEM What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM What Should I Do To Be Well Nourished?

CONCERN/CONCEPT Nutritional Needs/Dietary Goals and Guidelines

HOMEMAKING SKILLS

- Evaluate sources of nutrition information
- Calculate nutrient density
- Recognize sources of reliable information
- Teach nutrition to family members
- Identify nutritional components of food

PROCESS SKILLS	CONCEPTS	STRATEGIES
11.		Do a bulletin board depicting activities that relate to food and life styles. (I like to eat out. I had Mexican food for dinner last night. I eat hamburgers and french fries three times a week.) Discuss the following questions. -- How can I meet my nutritional needs if I am on the... (volleyball team, football team)? -- What if I do not meet my nutritional needs? -- How can I meet my nutritional needs if my income changes radically?
		In small groups, develop a list of problems in securing an adequate diet. (Family members eating at different times; limited resources - money, time, energy, skills, knowledge; special dietary problems; influence of media advertising; children involved in active sports; vegetarian.) Save problem lists for later reference. Do pretest to assess level of nutrition knowledge. Review as needed. (Refer to Module 1.11e for basic nutrition and 1.13e for food facts, fads and fallacies.)
	Sources of information	Using resources, compile a list of sources of nutrition information. Develop a list of criteria for evaluating the source. (Refer to Module 3.14 for influence of media.)

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Personal food patterns	Plan a tasting laboratory to introduce unusual foods. (Tofu, kelp, unusual fruits and vegetables.) Do *Fact or Value sheet. Value claims rate things as to worth. Factual claims identify a condition and may be true or false. For each fact, cite supporting or refuting evidence. For every value claim, state whether you agree or disagree and why. Identify the value underlying each of these statements. (Refer to Values Introductory Module, 0.01, for categories.) -- People want attractive and appealing foods, not primarily nutritious ones. (aesthetic) -- Convenience foods are too expensive. (economic) -- Backpackers should carefully dispose of food waste and packaging. (environmental) -- Persons should reduce their intake of sugar. (health-safety) -- Acknowledgement of nutrition is essential. (intellectual) -- The United States has an obligation to contribute to the alleviation of world hunger. (moral) -- It is in one's best interest to be well nourished. (prudential) -- One should not eat pork products. (religious)
	Nutrients and functions	Using resources, develop a chart of nutrients, functions and sources. Analyze ways which nutrients interact. Explain the concept of vitamin toxicity. In small groups create ads to "sell" the various nutrients. In groups, make posters showing sources of various nutrients. Post in room.
	RDA	Using resources, define and research RDA requirements for various age groups. (Available from National Academy of Sciences, Office of Publications, 2101 Constitution Avenue, NW, Washington, DC 20418.) Is the RDA a reliable source? Why or why not?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Dietary guidelines	Review *Dietary Guidelines for Americans. Is this a reliable source? Make posters illustrating the points. Construct sample common eating patterns for a day that creates the problems listed (lack of variety; too much fat, sugar, sodium). Revise these menus to follow the dietary guidelines. Do computer simulation of your diet and compare to dietary guidelines. Evaluate menus in school cafeteria according to these guidelines.
	Nutrient density	Nutrient density is determined by assessing a food's nutritive value by computing the ratio of nutrients to energy (calories) present. *Nutrient Density = $\frac{\text{\% RDA for Nutrient}}{\text{\% of Recommended Energy}}$ x 100 % RDA for Nutrient = $\frac{\text{Amount of Nutrient Present in Food}}{\text{RDA for Nutrient}}$ x 100 % Recommended Energy = $\frac{\text{Calories in Food}}{\text{Total Daily Calories Recommended}}$ x 100 (Note: The Comparison Cards of the National Dairy Council make visible the nutrient density concept when the grey calorie bar on the chart for each food is compared with the colored bars indicating values for eight nutrients. Students might also compare figures representing the percent of the RDA of calories (energy) a food contains with the percent of RDA of the other nutrients.) Calculate nutrient density for fast-foods. See chart *Nutrient Content of Fast-Food Entrees and Potatoes. Compare.
	Nutrient costs	Compare the cost of food which supplies the RDA for a specific nutrient (vitamin A, C, iron, calcium) with the cost of vitamin pills or other supplements which contain the same nutrient.

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Nutrient costs (continued)	Refer to list of dietary problems compiled at beginning of module. Use the practical reasoning process for each problem. Identify situational factors, values, alternatives and consequences. Test the decision. What if everyone did it? Would you advise your child to do it? FHA/HERO - Plan a nutrition peer education project. Consider: -- A nutrition column in the school newspaper (include food jokes, comic strips, puzzles). -- Survey of student food habits (junk food addiction, breakfast eating). Publish results and suggestions for improvement in school newspaper. -- A school "junk food" fast. -- Skits for pep assembly relating food to fitness. -- Sell "trick or treat" bags of nutritious snacks. -- Perform a daily soap opera over school intercom for a week. -- Do a nutrition advice column in school newspaper. FHA/HERO - Serve nutritious snacks at meetings. Include a physical fitness activity in meetings. FHA/HERO - Identify a nutrition problem in your community (vending machines sell pop but no fruit juice, too much waste in school cafeteria, too few students eating balanced lunches in school cafeteria). Develop a plan and take action. IEE - Record all food and beverages consumed by your family during a one week period. List the most commonly consumed items. Analyze the data and suggest changes if needed.

FN 1.12

FACT OR VALUE

1. The opportunity to live a healthy life is a basic human right.

2. Society pays for inadequate nutrition, therefore, government ought to establish policy.

3. An individual's diet is a matter of social concern, as individual choices cumulatively affect family and society, now and in the future.

4. Limited financial resources prevent the attainment of a nutritionally adequate diet.

5. Persons should exercise that right and the accompanying responsibilities.

6. There are many living expenses; individuals and families must decide how they will spend their limited resources.

7. Eating is a social activity in which group, not nutrition, priorities are regarded as more important.

8. Learning about nutrition should be a lifelong process.

9. A healthy society, composed of fully functioning individuals, is desirable; when some people do not do their part, they are affecting others.

10. A knowledge of accurate nutrition principles is a fundamental basis for making individual and dietary choices.

11. Anything which allows people to feel a sense of belonging is good.

12. Adequate nutrition is a responsibility of government policy and control.

Source: "Am I Obligated to be Well Nourished?" Pennsylvania State University.

FN 1.12

DIETARY GUIDELINES FOR AMERICANS

1. Eat a Variety of Foods

   The greater the variety, the less likely you are to develop either a deficiency or an excess of any single nutrient.

2. Maintain Ideal Weight

   For most people, their weight should not be more than it was when they were young adults (20-25 years old). To lose weight, increase physical activity, eat less fat food, eat less sugar and sweets and avoid too much alcohol.

3. Avoid Too Much Fat, Saturated Fat and Cholesterol

   If you have a high blood cholesterol level, you have a greater chance of having a heart attack. Some people can consume diets high in saturated fats and cholesterol and still keep normal blood cholesterol levels. Others, unfortunately, have high blood cholesterol levels even if they eat low-fat, low-cholesterol diets. For the United States population as a whole, reduction in our current intake of total fat, saturated fat and cholesterol is sensible.

   Do not eliminate from your diet foods such as eggs and liver. Although high in cholesterol, they contain many essential minerals and vitamins, as well as protein.

4. Eat Foods with Adequate Starch and Fiber

   Complex carbohydrate foods, such as beans, peas, nuts, seeds, fruits and vegetables, and whole grain breads, cereals and products contain many essential nutrients in addition to calories. They also contain fiber which tends to reduce the symptoms of chronic constipation, diverticulosis and related diseases.

5. Avoid Too Much Sugar

   The major health hazard from eating too much sugar is tooth decay. Frequent snacking of foods high in sugar increases the risk.

6. Avoid Too Much Sodium (Salt)

   Adults in the United States take in much more sodium than they need. Sodium intake may contribute to high blood pressure. Use less table salt. Eat sparingly those foods to which large amounts of sodium have been added.

7. If You Drink Alcohol, Do So In Moderation

   Alcoholic beverages tend to be high in calories and low in other nutrients. Alcohol alters the absorption and use of some essential nutrients. One or two drinks daily appear to cause no harm in adults. Pregnant women should avoid alcoholic beverages.

"These guidelines are intended for people who are already healthy. No guidelines can guarantee health or well-being. Health depends on many things, including heredity, lifestyle, personality traits, mental health and attitudes, and environment, in addition to diet."

"Food alone cannot make you healthy. But good eating habits based on moderation and variety can help keep you healthy and even improve your health."

February, 1980
U.S. Department of Agriculture
U.S. Department of Health,
Education and Welfare

FN 1.12

NUTRIENT CONTENTS OF FAST-FOOD ENTREES AND POTATOES

	Serving size (oz.)	Calories	Fat (gm.)	Carbohydrates (gm.)	Total sugars (gm.)	Sodium (mg.)	Percentage RDA[2] Protein	Vitamin A	Thiamin	Riboflavin	Vitamin B_6	Vitamin B_{12}	Niacin	Calcium	Phosphorus	Iron
HAMBURGERS																
BURGER KING Whopper	9	660	41	49	9	1083	57%	12%	51%	30%	19%	67%	55%	9%	29%	26%
JACK-IN-THE-BOX Jumbo Jack	8 1/4	538	29	44	7	1007	61	9	92	41	13	70	57	13	29	24
McDONALD'S Big Mac	7 1/2	591	33	46	6	963	59	5	52	33	13	63	55	23	44	23
WENDY'S Old Fashioned	6 1/2	413	22	29	5	708	52	8	36	26	13	83	45	8	24	27
SANDWICHES																
ROY ROGERS Roast Beef Sandwich	5 1/2	356	12	34	0	610	63	5	38	29	16	37	50	2	28	23
BURGER KING Chopped-Beef Steak Sandwich	6 3/4	445	13	50	0.7	966	67	5	48	34	25	40	66	15	37	30
HARDEE'S Roast Beef Sandwich	4 1/2	351	17	32	3	765	41	4	36	22	10	47	42	8	29	17
ARBY'S Roast Beef Sandwich	5 1/4	370	15	36	1	869	52	4	36	21	10	53	56	5	35	20
FISH																
LONG JOHN SILVER'S	7 1/2	483	27	27	0.1	1333	72	5	17	12	16	133	24	3	46	3
ARTHUR TREACHER'S Original	5 1/4	439	27	27	0.3	421	46	3	11	6	10	27	18	2	32	3
McDONALD'S Filet-O-Fish	4 1/2	383	18	38	3	613	35	3	39	19	6	23	25	14	27	9
BURGER KING Whaler	7	584	34	50	5	968	48	3	38	20	7	60	31	8	50	12
CHICKEN																
KENTUCKY FRIED CHICKEN Snack Box	6 3/4	405	21	16	0	728	78%	4%	21%	25%	19%	40%	72%	6%	35%	14%
ARTHUR TREACHER'S Original Chicken	5 1/2	409	23	25	0	580	57	3	12	10	24	10	87	2	33	4
SPECIALTY ENTREES																
WENDY'S Chili	10	266	9	29	0	1190	50	54	20	169	18	47	8	9	27	27
PIZZA HUT Pizza Supreme	7 3/4	506	15	64	6	1281	61	36	59	40	17	43	49	41	46	24
JACK-IN-THE-BOX Tacos[3]	5 1/2	429	26	34	3	926	35	25	16	13	15	27	18	20	33	12
POTATOES																
McDONALD'S Fries	3 3/4	326				82										
BURGER KING Fries	5 3/4	542				117										
JACK-IN-THE-BOX Fries	6 1/4	623				369										
WENDY'S Fries	5	385				151										
LONG JOHN SILVER'S Fryes	1 3/4	198				64										
ARTHUR TREACHER'S Chips	3 1/2	269														
HARDEE'S Shoestring	6 3/4	554				590										
ARBY'S Fries	6	527				319										
ROY ROGERS Fries	6	548				242										
KENTUCKY FRIED CHICKEN Mashed	3 1/2	89				335										

[1] Limited analysis; potatoes are known to be a reasonably nutritious side dish.

[2] Recommended Daily Allowance for an adult woman, as set by the National Academy of Sciences/National Research Council.

[3] One-half of a 15 1/2-oz., 10-in. Pizza Supreme Thin and Crispy.

Source: "Am I Obligated to be Well Nourished?" Pennsylvania State University.

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PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Nutritional Needs/Food Facts, Fads and Fallacies

HOMEMAKING SKILLS

- Distinguish between food facts, fads and fallacies
- Identify nutritional components of food

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Myths about food	Administer pretest *Food Facts or Fallacies. Add vocabulary terms such as organic foods, natural foods, food quacks, malnutrition, soil depletion theory. Use resources to confirm answers on pretest. Discuss why these are often accepted without question. Put these questions on the bulletin board. Add to list. Save to use at the end of the module. -- What are "health" foods? (Foods reported to have special value nourishing the body.) -- Why are they expensive? -- What is the difference between organic and natural foods? (Organic is food grown without the use of chemical fertilizer or pesticide and natural is food organically grown, without preservatives, additives, important parts of food removed.) -- How do you know what is truth or fallacy about food? -- Is a vegetarian diet better for a person than a "regular" diet? -- How much can we believe about foods causing cancer? -- What is an additive? Are they always harmful? -- Who decides whether an additive should be in food or not? -- How seriously should we take the warning labels on foods? (Artificially sweetened soda.) -- What is our responsibility as a consumer for improving nutritive value of food nutrition labeling?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food fads	Using resources (Today's Health or other current magazines, television shows, County Extension Agency publications and/or speakers, Reader's Digest, periodical literature, or current textbooks), do "mini reports" on current food fads. List all data on different foods and nutrients currently experiencing much popularity among health food advocates. Share with class.
	"Health" foods	Visit a "health" food store. Make a list of items and prices. Look for similar items in regular grocery or drug store. Compare prices. Be sure to read labels. Role play and tape a television talk show to be shown to other classes on "health" foods. Play the parts of emcee, experts and audience members with questions.
	Fast-food fads	Individually make a picture of your favorite fast-food item. Label and sign your name. Mount on bulletin board or poster. Read *Fast-Food Chains. Draw conclusions from article regarding nutritive value of foods in fast-food restaurants. Read *Nutrition Tips for Fast-Food Freaks. Write on the board "Fast-foods are good for you". Make two headings - "Factual Claims" and "Value Claims". From the two articles list statements under each heading. Debate the statements and draw conclusions. Refer to bulletin board or poster that was developed earlier. For each favorite fast-food item, develop a balanced menu.
	Selective diets	Invite a resource speaker (dietitian, doctor, individual on a selective diet) or a panel of such persons to share information about selective diets. List reasons given by resource persons for such diets. Label these as "factual claims" or "value claims". Justify your choice. Read *Excerpts on Nutrition Advice. For each of the three excerpts discuss: -- Which one is trustwo[illegible]y?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Selective diets (continued)	-- What factual claims are made? -- What value claims are made? -- What support, if any, is given for these claims?
	Testing nutritional claims	Using resources, compile a list of questions with which to test nutrient claims for validity. Compile a list of warning signals. Consider - Beware of the information if: -- It does not follow the Basic 4 food groups. -- There is a product to buy. -- It blames most diseases on faulty diet or states that we are constantly in danger of subclinical deficiencies. -- It cures a disease other than malnutrition. -- It claims soil depletion causes malnutrition. -- It comes from a professional in a field other than nutrition. -- It claims all foods are over processed. -- Terms such as "miracle food, loaded formula, organic or natural" are used. -- It promises an easy way to health or weight reduction. -- Authoritative sounding titles are used. -- Testimonials are used. -- It makes extravagant claims.
PR	Reflection	Using practical reasoning, analyze the following situation - What should I do when my best friend believes a number of food myths and eats a poor diet? -- What are alternatives? (Do nothing, provide with information, send to a doctor, invite to your house for meals.) -- What are consequences for each alternative? -- Test decision. What if everyone did it? -- Would would I do if my best friend were showing signs of malnutrition? -- What if my best friend were pregnant?

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Reflection (continued)	Refer to list of problems at beginning of module. Distinguish between those questions which require a factual answer and those which require examination of values. In small groups, research answers to factual questions. As a class, use practical reasoning to discuss value questions (What should we do? rather than How to?). Collect facts to support alternatives/values.

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FOOD FACTS OR FALLACIES

True or False

_____ 1. Brown eggs have a higher food value than white.

_____ 2. Toasting reduces the calories in bread.

_____ 3. Protein is the most important nutritional need of the body.

_____ 4. One can eat and drink whatever he/she pleases if a vitamin and mineral capsule is taken each day to assure a supply of essential nutrients.

_____ 5. It is natural to get fatter as you get older.

_____ 6. Carbohydrates are more fattening than protein.

_____ 7. Overweight can be cured.

_____ 8. Canned grapefruit sections have as much food value as fresh grapefruit.

_____ 9. Food eaten before you go to bed is more likely to cause weight gain than if the same food were eaten for breakfast.

_____10. A person can drink too much milk.

_____11. Overweight people are generally happy, healthy people.

_____12. Because it is a high protein food, meat does not cause weight gain.

_____13. Beer is a source of nutrients.

_____14. Vegetable protein can be substituted equally for meat protein in a diet.

_____15. In order to be low-calorie, the ingredients in a recipe have to be changed drastically.

_____16. It makes no difference whether a person eats fast or slow.

_____17. It is better to lose weight as rapidly as possible whatever diet one follows.

_____18. Fat should be eliminated in a reducing diet.

_____19. Overweight is usually a glandular problem.

_____20. Alcohol, even though not a protein, fat or carbohydrate furnishes calories to the body.

_____21. Exercise increases the appetite.

_____22. One should drink less water while dieting.

_____23. The stomach shrinks during dieting.

_____24. Meal-skipping helps reducing.

_____25. Starches and carbohydrates are the same.

_____26. One should expect to feel weak and fatigued during weight reducing.

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_____27. Special low calorie bread should be used in reducing diets.

_____28. Margarine contains fewer calories than butter.

_____29. Grapefruit will reduce a person.

Source: Minnesota FHA/HERO "Student Body Handbook".

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FOOD FACTS OR FALLACIES
(Answer Sheet)

1. False The color of the egg shell has no relation to the nutritive value of the contents.

2. False Burning the bread does not burn away the calories.

3. False Calories in the diet are just as important as protein.

4. False This is a basic fallacy in fad dieting. A well-balanced diet of protein, carbohydrate and fat, along with vitamins and minerals, is essential to healthy nutrition whether or not one is dieting.

5. True It is natural to get fat as you get older unless you decrease calories as you get older. During childhood and youth, a certain amount of extra weight is desirable to meet the demands of our growing years. However, as a person grows older metabolism and physical activity often decrease faster than the appetite. Fat begins to accumulate as a person takes in more food day after day than his body uses. Any weight which has accumulated after age 25 (when growth has ceased) is likely to be essentially fat and therefore undesirable.

6. False Both are fattening. All surplus calories are stored as body fat regardless of the food source. This is true whether the calories come from broiled steak or apple pie.

7. False There is no "cure" for overweight--it can only be controlled. If we eat more than the body "burns up" for energy, all the excess is turned into stored fat.

8. True With present modern processing techniques there are only small differences in the nutritive values between fresh citrus fruits and those canned or frozen.

9. False The energy requirements of the body must be met whether awake or asleep. Food eaten at bedtime will not put on weight if the calories supplied do not exceed the daily caloric requirements for the given body weight.

10. True If milk takes the place of other essential foods, especially other protein foods, the diet will not be a balanced one. Milk is a good food but is very low in certain nutrients, especially iron, copper, and Vitamin C.

11. False In actual fact, overweight people are much more content after they have lost. Insurance figures have proved that overweight persons have a shorter life expectancy and are more susceptible to cardiovascular and degenerative diseases.

12. False Protein contains 4 calories per gram, carbohydrates contain 4 calories per gram, and fats contain 9 calories per gram. Therefore, any excess in the calories above our body requirements, regardless of the food source, result in storage fat deposited in the body.

13. False One 8 oz. glass of beer provides 115 calories and very little in the way of nutrients.

14. False Protein foods vary in the nutrients that go to make up a "complete" protein. A variety of protein food sources is therefore more desirable than any other protein food source.

15. False All ingredients should be considered when determining the caloric value of a dish. High Calorie recipes can be reduced in Calories by substituting low calorie ingredients without altering the satisfying quality.

16. False Most overweight people eat too fast. They consume large amounts of food without even realizing it. One should always eat slowly and chew food well. This gives the blood sugar regulatory mechanisms of the body a chance to act on our appetite-regulating centers. This reduces appetite and hunger during the meal and allows us to be satisfied with less food.

17. False The real trouble that can result when weight is lost too rapidly is not caused by the weight reducing itself but by the kind of weight which is lost. A too rapid drop in weight almost always means that large amounts of protein (in particular muscle and liver tissue) are being lost instead of fat (adipose tissue). Many popular reducing fads are based on diets that are very low in protein foods. They often produce a rapid loss of body weight but at the risk of incurring serious illness. The loss of weight to be looked for each month by a moderately overweight person is between 5 to 8 pounds. Too rapid loss of weight in some persons on a good reducing diet may result in weakness, dizziness, and the tendency to anginal attacks. Rapid weight reducing should not be attempted except under the close supervision of a physician who can prescribe a proper diet that will make sure the weight loss is fat tissue.

18. False Some fat is necessary both for its nutrient value as well as for its satiety value in staving off hunger.

19. False In only a very small percentage of the obese population is overweight due to identifiable metabolic or glandular disorders and these can often be corrected medically. In all individuals whatever the mechanism of development of obesity, fat can accumulate only if food intake is greater than energy expenditure.

20. True Alcohol has no nutritive value. Therefore, alcohol is used by the body only as a course of Calories (energy). An equivalent number of food Calories become a surplus, however, and are stored as fat. Few people realize that a large whiskey or gin, or a pint of beer, is the Caloric equivalent of two eggs, or one glass of milk, or a slice of bread and butter, or an average portion of potatoes.

21. False Moderate exercise, done regularly, is a regulator of body weight. It does not increase the appetite in the overweight person. Activity is a good way to use up Calories and keep the body physically fit. In many obese person, the beginning of obesity can be traced to decreased activity.

22. False Water intake does not interfere with the loss of fat during weight reducing. Sufficient water--an average of 6 glasses between meals--should be included in the daily diet.

23. False What many persons consider "shrinking" of the stomach is rather "shrinking" of the appetite as one becomes adjusted to eating less.

24. False Skipping meals is not a good way to reduce. It usually results in overeating. It is desirable to plan the diet around 3 or more meals a day, each meal containing adequate protein. When the daily food intake is divided into small portions and eaten at intervals, continued weight loss is more likely to occur.

25. False All starches are carbohydrates. But, not all carbohydrates are starches. Carbohydrates include the two main classes starches and sugars. Carbohydrate is the chemical name for one of the three kinds of food substances that supply us with energy (the others are protein and fats). Bread, cake and pastry, flour, cereals, rice puddings, rich desserts, and most vegetables (especially tubers and legumes) are examples of high starch foods. Cane, beet, maple, and malt sugars are examples of pure carbohydrate.

26. False If one loses weight too rapidly (as in "crash" dieting), weakness will generally follow. However, a moderate rate of weight loss adapted by your physician to your individual constitution and activity should not lead to excessive fatigue and weakness.

27. False One of the basic principles of a good reduction diet is to base it on usual foods available. Special bread is not usually available, is usually higher priced, and is lower in calories because it is sliced thinner.

28. False Margarine and butter have exactly the same of number of calories --45 per teaspoon.

29. False Reduction in weight is accomplished by reduction of total calories eaten below the number required by the body. There are no magic preparations in grapefruit or any other food that melt away calories.

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FAST-FOOD CHAINS

Fast foods are not junk foods (too many calories for too few nutrients). We tested a representative selection of fast-food entrees from outlets in the New York-New Jersey area for their principal nutrients. We also tried french fries (mashed potatoes from KENTUCKY FRIED CHICKEN) and chocolate shakes. Any of the fast-food entrees we sampled plus french fries and a shake would provide about one-third of all the nutrients you should have daily. However, the meal would also provide more than half the calories recommended daily for a woman or child. For a teenage boy or an adult male, neither of them on a weight-reducing diet, the calories are still close to half of what he should have in a day. Fast-foods are also high in fat and sodium. Nevertheless, they are not entirely off limits: They are acceptable nutritionally when consumed prudently, not often, and as part of a well-balanced diet. If you do eat fast-foods often, you might consider skipping the fries and shakes. The fries provided a lot of fat and calories, and some were also high in sodium. The shakes were full of sugar and high in calories.

NUTRITION. The table of nutrient contents shows how the fast-food entrees compared in supplying an adult woman's RDA, or Recommended Daily Allowance, for a number of essential nutrients. Fat content, high in most of the entrees, usually accounted for most of the calories. Additional calories came from carbohydrates, primarily starches; the entrees' sugar content was usually low. Most of the entrees contained at least one-quarter of a woman's RDA for thiamin, riboflavin, vitamin B_{12}, niacin, phosphorus and zinc, and less than one-quarter of a woman's RDA for calcium, magnesium and vitamins A, B_6 and C. There was plenty of sodium in nearly all the fast-foods -- entrees, fries, even shakes. With the additional sodium from french fries and a shake, there may be more sodium than you want in a single meal.

ENTREES. All of the burgers supplied more than half the daily protein recommendation for a woman (about 67 percent for a child 7 to 10 years old, and about 44 percent for a teenage boy). They also had about one-quarter to one-half of the RDA for most of the vitamins and minerals. WENDY'S OLD FASHIONED supplied all those nutrients with fewer calories and less sodium than the others. In general, the burgers were higher in calories, fats, sugars (from the sauces, presumably), and sodium than all the other fast-food entrees. Among the sandwiches, roast beef is the most frequent offering. All come on a bun or roll. The ROY ROGER'S ROAST BEEF SANDWICH is real, whole roast beef; the ARBY'S and HARDEE'S sandwiches appear to be made with pressed beef. BURGER KING'S sandwich is a chopped-beef "steak". The sandwiches were generally lower in calories and fats than the other entrees. The chopped-steak sandwich was more nutritious than the roast beef ones, but it was also higher in calories and sodium. You will not find the low calories typical of fish in the fast-food version. As a group, the fish entrees had more fat and more calories than the chicken or the roast beef sandwiches; only the burgers were higher in calories. The fish entrees varied widely in nutrient levels, but all were lower in nutrients than the burgers.

Source: "Am I Obligated to be Well Nourished?" Pennsylvania State University.

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NUTRITION TIPS FOR FAST-FOOD FREAKS

By

Stacia Robbins

When your taste buds tingle for a slice of pizza or a burger and fries, you may want to go to a fast-food place ... but go easy. Pass up the sweets, and, if the place has one, go to the salad bar.

Have you had your break today -- at McDonald's, Burger King, Kentucky Fried Chicken, Arthur Treacher's, Burger Chef, Taco Bell, Roy Rogers, Wendy's, Pizza Hut or ...? If you have, you are not alone. A survey published in the Washington Post in October, 1978, reported that 54 percent of all Americans over the age of 12 eat at McDonald's at least once a month. And that is only McDonald's.

Many teens -- and adults for that matter -- may say, so what? Fast-food is quick, cheap, fun and tastes good. Unfortunately, it may also provide questionable nutrition.

In the New York Times Magazine, July, 1974, Jean Mayer, then a professor of nutrition at Harvard's School of Public Health, wrote, "The typical fast-foods meal -- hamburgers, french fries and a malted -- does not give you much nutrition. It is very low in vitamins B and C, but very high in saturated fats. It is typical of the diet that raises the cholesterol count and leads to heart disease."

Dr. George Christakis, of New York's Mt. Sinai Medical School, said to the American Public Health Association in 1974, "The food that is fueling the McDonald's generation ... can set the stage for chronic disease later in life."

Do those comments sound too serious to be taken seriously?

Let us check it out. Dr. Mayer says a typical fast-food menu is high in fat. And many doctors believe that large amounts of fat in people's diets are linked to high rates of heart disease, cancer, hypertension, obesity and other diseases.

Many items on a typical fast-food menu are high in sugar as well as fat. They include shakes and various dessert items.

In terms of actual nutrients, there is enough protein for a child, or adult for one meal in the entree items such as pizza, chicken, beef and fish. But you do not get enough vitamins A, C, several B vitamins or iron from this food.

Though a fast-food shake also provides nutrients, it can be a nutritional pitfall. Consumer Reports pointed out in a recent issue that while fast-food shakes are a good source of calcium, "plain milk provides more calcium with fewer calories." Their analysis also showed that a single shake may contain as much as 8 to 14 teaspoons of sugar.

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Remember when a shake was a milkshake? Milk has been dropped from the name on many fast-food menus because most fast-food shakes are not made from fresh milk, cream or ice cream. Instead, they are made from vegetable oil (often coconut or palm oil), casein, nonfat milk solids, emulsifiers, flavorings and sugar.

Another nutritional pitfall is an order of fried potatoes. Potatoes -- baked, boiled, steamed, mashed, scalloped -- in fact, cooked any way but deep-fried, are a nutritional bargain. They have few calories and provide a large percentage of the daily requirements for protein and many vitamins and minerals. They are low in fat and high is desirable complex carbohydrates. But when they are deep-fried, potatoes become a high-fat, high-calorie food with little nutritional value.

Then there is salt. Fast-foods are often high in refined, commercial salt which is primarily sodium chloride. Dietary Goals, published by the U.S. Senate's Select Committee on Nutrition and Human Needs, noted that excessive intake of commercial salt (about 40% pure sodium) has been linked to a variety of serious diseases. High on the list of such diseases is hypertension (high blood pressure) which now affects numbers of children and teens as well as very many adults. Hypertension is a degenerative (breaking down) condition that can lead to strokes, heart attacks or kidney failure.

The Food and Nutrition Board of the National Academy of Sciences (NAS) recommends that a healthy person take in no more than 3 grams of salt a day (1.2 grams pure sodium). Today's average daily salt consumption per person in the U.S. is between 6 and 18 grams.

According to a study McDonald's commissioned to evaluate its own food items, one meal of a Quarter Pounder burger with cheese, french fries, chocolate shake and cherry pie provides 2.107 grams of sodium (or 5.2675 grams commercial salt). This is almost twice the recommended maximum suggested by NAS.

Many fast-foods have been called "junk food" by some nutritionists and public health doctors. But many other people do not think that is fair. Whether it is fair or not, fast-foods have been pointed out as symbolic of what is wrong with American eating habits. What makes "junk food" junk is that it provides few or no nutrients and lots of sugar and calories. By that definition, the main meals in a fast-food establishment are not junk foods ... but the sugary drinks, doughnuts, pastries and pies are.

A diet heavy in fast-foods may not be very healthy. But that may not convince you, or me, to give up such foods. So, what should you do when a gnawing need for a fast-food break overwhelms you?

First of all, go easy. Stick with pizza when you can, or, in a burger place, stay with the main meals of burgers or fish.

Pass up the colas and desserts. And when you crave a shake, get a real one made with milk and ice cream. Most fast-food restaurants make it almost impossible to get a nutritious drink. If you can, have pineapple,

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apple, tomato or V-8 juice -- usually sold in small cans. If the establishment only has fruit drinks or colas, you are better off with tea, coffee or water.

With luck, your favorite fast-food place may have a salad bar. If it does, load up on lettuce, cucumber, green pepper, etc. It will provide you with necessary vitamins, minerals and fiber.

If you cannot get salad with your fast-foods, be sure to eat fruits and vegetables at other meals.

Nutritional Content of Fast-Foods

ENTREES	Calories	Protein (gms.)	Carbohydrates (gms.)	Fat (gms.)	Sodium (gms.)
Burger King Whopper	606	29	51	32	909
McDonald's Big Mac	541	26	39	31	962
Burger Chef Hamburger	258	11	24	13	393
Arthur Treacher's Fish Sandwich	440	16	39	24	836
McDonald's Filet-O-Fish	402	15	34	23	709
Kentucky Fried Chicken Original Dinner	830	52	56	46	2285
Kentucky Fried Chicken Crispy Dinner	950	52	63	54	1915
Pizza Hut Thin N Crispy Cheese Pizza (half of 10-inch pie)	450	25	54	15	N.A.
McDonald's Egg McMuffin	352	18	23	20	914
Taco Bell Taco	186	15	14	8	79
SIDE DISHES					
Burger King French Fries	214	3	28	10	5
McDonald's Chocolate Shake	364	11	60	9	329
McDonald's Apple Pie	300	2	31	19	414

Data Supplied by Companies. N.A. = Not Available.

Source: Senior Scholastic, December 13, 1979.

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EXCERPTS ON NUTRITION ADVICE

"In this book, I have attempted to give answers--short and, I trust, readable--to the most widespread questions that my fellow Americans seem to have about feeding themselves and their families. . . I believe that information I give here represents what the legal profession calls 'the concensus of informed scientific opinion' and can be relied upon by the public.

At the same time, as a research scientist, I know that the most solidly established facts can be successfully challenged by new and imaginative experiments, so that it is possible--indeed, it is likely--that some of the beliefs we now hold will some day be found to be in error. At any given time, however, the prudent person acts on the basis of the best available knowledge." (Mayer, 1975) Dr. Jean Mayer was formerly Professor of Nutrition for the Department of Nutrition at the Harvard School of Public Health and is now President of Tufts University.

"First published in 1967, Redbook's Wise Woman's Diet is a nutritionally sound 1220 calorie a day diet that promotes good eating habits while permitting the dieter to lose weight safely and surely. . .

This special dieting manual was prepared by Redbook's food staff in conjunction with our board of diet consultants: Dr. Johanna Dwyer, director of the Frances Stern Nutrition Center, New England Medical Center Hospital, in Boston; Dr. Jules Hirsch, professor and senior physician to Rockefeller University, in New York City; and Dr. Myron Winick, director of the Institute of Human Nutrition at Columbia University, in New York City." (Redbook's Wise Woman's Diet, 1972)

"Dr. Lendon Smith, better known as 'The Children's Doctor' for his TV show and book by that name, is trading on his wise and witty celebrity image to teach parents that 'youngsters act what they eat.'

Proper nutrition can cure everything from acne to drug abuse, bedwetting and crime, contends Smith in his latest book, 'Feed Your Kid Right'. . .

A proper diet, eliminating sugar and white flour, will calm most hyperactive children, says Smith, who prescribes drugs only as a last resort." (Krucoff, 1979)

Source: "Am I Obligated to Be Well Nourished? Pennsylvania State University.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Nutritional Needs/Preserving Food Nutrients

HOMEMAKING SKILLS

- Identify methods of food preservation
- Demonstrate preservation methods

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Effects of different methods of food preservation	Observe a sample of raw, canned and frozen foods. List differences in appearance, texture and flavor. Generate questions based on samples. -- Why do some samples look more appealing than others? -- Why are some fruits and vegetables more flavorful when fresh or frozen than when canned? -- Is there any difference in the nutrients they provide? (Fresh versus canned.) -- What nutrients do these (samples of fruits and vegetables) provide? -- Do different methods of preparation change the amount of nutrients provided? -- Are raw carrots better for you than cooked carrots? Why? -- How can I retain the nutrients in garden-fresh foods? -- If most fruits and vegetables are better nutritionally, why should I cook any of them?
	Preserving food nutrients	Using resources, describe effects on preservation of nutrients when: -- Potatoes are diced, then cooked. -- Broccoli is cooked in liquid without a lid. -- Vegetable juice from cooked vegetables is washed down the drain. -- Baking soda is added to green beans. -- Food is soaked in water before cooking. -- Large amounts of water are used in cooking.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Preserving food nutrients (continued)	Add to the list practices which result in nutrient loss. Invite the produce manager from a local grocery to speak to your group. Discuss what is done commercially to preserve nutrients from the field to the grocery case. Discuss how nutrients are affected or if they are affected by certain "cosmetic" practices used on fruits and vegetables (spraying oranges with red dye).
	Methods of preserving nutrients	Using resources, define additives and describe how they are used in foods. Do experiments using foods with and without additives (bread, wheat germ, processed flour). Chart effects over two weeks and determine shelf life. Display labels of food containers. Underline the additives.
	Comparison of preservation methods	Divide class into small groups. Provide each group with a cooking utensil (pressure cooker, pyrex double boiler, wok, stainless steel saucepan, cast iron frying pan, microwave). Plan preparation of a similar food (carrots). Chart and compare ways of preparing a similar food. Serve samples to your family. Discuss your family's reception and preference of these samples. Note ways of preserving nutrients.
	Utensils and techniques	Compare results of food preparation and consider the following. -- Peeled versus not peeled vegetables. -- High heat versus low heat. -- High fat (deep frying) versus shallow fat frying. -- Types of utensils used. -- Forms of cookery: waterless cookery, steam cookery, boiling water cookery. -- Covered versus uncovered pans. Using resources, develop a list of nutrient-preserving methods of food preparation. -- Using liquids in which food is cooked. -- Using small amount of water.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Ways to preserve food nutrients	Suggest ways of food preparation you may use at home (related to styles of preparation and foods to which the family is accustomed) that will help retain nutrients in food. IEE - Plan a complete, nutritious meal for a person in your age group. Report to class the meal plan and ways of preserving nutrients in food preparation, as well as food cooking.
	Reflection	Individually complete these sentences. -- Food nutrients may be retained by ... -- Fresh produce should be selected ... -- Our garden produce will ... -- Methods of cookery that retain nutrients are ... -- It is important to preserve nutrients because ... -- Our family can preserve nutrients by ...

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Individual Problems/Weight

HOMEMAKING SKILLS

- Evaluate nutritional needs
- Identify nutritional components
- Establish a physical fitness program
- Relate values and weight control

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Self-image	Display on a bulletin board food pictures with captions such as: Are you more like ... -- an apple or a slice of pie. -- an asparagus spear or a potato. -- a cow or a lamb. -- a carrot or a squash. -- a lasagne noodle or a spaghetti noodle. -- a banana or a pineapple. -- an ice cream sundae or a diet soda. Discuss the reasons the foods were selected by individual students. Provide the case study below for discussion. Brett and Candace are having a swimming party Friday evening and are making plans for the entertainment and refreshments. Brett: Chips and dip with soda pop will be enough for refreshments. After all, my allowance is nearly spent. Maybe you could make brownies? Or, the Hamburger Inn will deliver hamburgers and french fries.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Self-image (continued)	Candace: Do you think everyone will like just junk food? I heard Mary Anne and Carole are on diets again; plus, the coach has said that the team must watch what they eat. Brett: Well, what do you suggest? Candace: We really do not have much time or money. Also, are we playing records or just swimming? Some of the group cannot swim. Brett: They just do not want to be seen in their suits! Have you seen Will's toothpick legs? What about Frank's potbelly, to say nothing of Carole's! Ha! Candace: Really, Brett! We <u>all</u> have our problems! Brett: That is right. Perhaps we should do some serious thinking about the food and entertainment rather than just settle for junk food and swimming. After all, everyone is concerned about their body. Brett and Candace plan to meet tomorrow after talking to their parents and home economics instructor. Brett also agrees to go to the library to look up nutritious snack recipes.
PROBLEM		What is the problem in this situation? (Planning nutritious foods, overweight and underweight friends.) What personal factors and values will affect Brett and Candace's decisions? (Money, time, coaches, teacher suggestions, preparation skills, body appearance.) What information do we need to solve the problem? (Recommended dietary guidelines, nutritious snack recipes.)
	Peer pressure	Record all food eaten for meals and snacks for one or two days. Identify reasons for eating each food/meal/snack. Discuss the reasons people give for eating and decide which ones are related to peer pressure. Use *<u>Chart</u> provided. Role play situations based on food records which illustrate eating habits after school, bedtime, at school activities, before meals, while watching television, while talking on the phone, at the movies and at sports activities. Discuss how each situation affects weight. Discuss following questions: What is hunger? What is petite? When do you want to eat?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Peer Pressure (continued)	Using resources, determine how diet, heredity, activity, stage of growth, physical and psychological factors affect size. Report findings.
	Calorie consumption and expenditure	Develop charts to determine caloric requirements according to age and sex. Predict what will happen when people consume more or less than is required. Discuss the number of calories used for various activities. Use *Wheel of Activity.
		Compute the number of calories consumed and the number of calories expended in a 24 hour period. Analyze consequences if this pattern of eating is continued. What alternatives do you have?
		(Refer to Brett and Candace case study.) What alternatives do Brett and Candace have in regards to refreshments? What decision should be made based upon consequences. Test decision. Evaluate decision considering personal values.

ALTERNATIVE	CONSEQUENCE	TEST DECISION
1. Serve chips and dip	- Easy to prepare - Low in nutrition - Some guests would not want - Boring	- What if everyone served chips and dip? - Would chips and dip be appropriate for a person on a low fat diet?
2. Serve fruit and whole wheat cookies		
3.		

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Nutritious snacks	Find recipes for nutritious snacks. Compute the calories. Divide the class into small groups. Each group will select a nutritious snack to prepare in laboratory, as well as prepare a sales campaign. The campaign will include reasons why the snack should be "bought" and less nutritious snacks should not be "bought". Students may use signs, posters or other literature. After sales addresses are made and products sampled, the class may decide which product was the most nutritious.
	Fast food and fitness	Analyze caloric amounts of common fast food offerings. Make a list of homemade substitutions or ways to eat economically (calorie wise) at fast food establishments. Refer to handouts *Fast Food Fare and *Fast Food Fatties.
	Student self-check on weight	Distribute the *Student Self-Check Weight Control. Discuss responses. IEE - Develop a reduction or weight gain plan. Keep a record of consumption and expenditure. -- Survey diets available and highly publicized. Analyze strengths and weaknesses. Write a report. -- Plan a party where part of the entertainment is a contest to create a low calorie sandwich or a salad. Report on the results based upon nutrition and creativity. -- Investigate the increasing problem of obesity among Americans. Write a report based upon implications of the problem. -- Develop brown bag lunches suitable for weight gain or loss. Share ideas with class members. Refer to handout *Brown Bag Lunches. FHA/HERO - Complete one or all of the following. -- Listen to guest speakers demonstrating different fitness and diet plans. -- Brown bag it! Promote nutritious lunches through a poster campaign. -- Organize an after school fitness session. -- Tour schools with a good nutrition puppet show.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Student self-check on weight (continued)	-- Sponsor a "lose-a-thon" in the school. -- Prepare and conduct a "Film Festival" for your school showing films related to good food habits as related to weight gain/loss. -- Utilize the Student Body Workbook available from National Association Future Homemakers of America, Inc.

FN 1.21e

CHART

Time	Activity	Food Consumed	Where?	With Whom?

FN 1.21e

WHEEL OF ACTIVITY

The object of the activity is to be the first player to fill the Activity Category Board with the appropriate Activity Cards. The game may be played by 2 to 6 players.

Preparation: Make 30 Activity Cards, using items listed, no larger than 3 1/2 x 4 inches. Write words Activity Card on back of cards. Reproduce six Activity Category Boards, one for each player. Reproduce several sheets of Calorie Points which will be cut apart and used like "money" during the game.

Play: Before playing the game all players must be familiar with the number of calories per hour required in each of the five categories of activity.

Each player is given an Activity Category Board before play begins. The first player draws an Activity Card and places the card, face up on the table so all players may see it. Next the player spins the Calorie Wheel spinner. The spinner must land on a space not more than the amount required by the activity on the card. Example: You draw a card that says "You bowl one hour." The spinner can land on any space of 350 calories or less. If you land on 400 calories, you wait until your next turn to play. If you land on 200 calories, you receive 200 Calorie Points "money" that you keep until your next turn.

The play proceeds around the group of players in this manner. On your next turn, you spin to accumulate more Calorie Points. When you have earned enough points without going over the amount needed, you may buy the Activity Card in front of you. The last spin for Calorie Points must not go over the amount required. If the amount required is exceeded, you must wait your next turn. Example: You have accumulated 300 calories to buy "You bowl one hour." In this turn you land on 100 calories, which is over the amount required. You may buy the card on the next turn that your spinner lands on 50, even if it takes two or three turns. The Activity Card is placed on the Activity Category Board in the proper space when you have the amount required without going over the amount. You must place the Activity Card in the proper category or be challenged by other players (explained later in the rules). If you draw an Activity Card, that has already been filled on your Activity Category Board, you may draw again to get another card. Place the unneeded cards on the bottom of the deck. The first person to properly fill all of the Activity Category Board is the winner.

Bonus: If the spinner lands on Bonus, you may automatically put your Activity Card in its proper category on the Activity Category Board.

Challenge: If an Activity Card is placed in the wrong category, any player may challenge. The Master Clue Card is used to check the proper categories. If the card has been placed in the wrong category, the player must remove the card from the Activity Category Board. If card is in the proper category, the person who challenged must forfeit either an Activity Card on his/her Activity Category Board or forfeit the Calorie Points (not both). The choice is left to the person who has challenged.

Source: West Virginia State Department, Adult Roles and Functions.

FN 1.21e

Activity Cards (one item per card)

You read your favorite book 1 hour

You write letters to friends 1 hour

You watch television 1 hour

You played cards 1 hour

You sewed 1 hour

You listened to records 1 hour

You prepared the family dinner 1 hour

You walked slowly with a friend 1 hour

You ironed clothes 1 hour

You dusted furniture 1 hour

You typed letters rapidly 1 hour

You folded the family laundry 1 hour

You mopped the kitchen 1 hour

You scrub the bathroom 1 hour

You worked in the flower garden 1 hour

You wash the car 1 hour

You hang wallpaper 1 hour

You bowl 1 hour

You play golf 1 hour

You hoe in the garden 1 hour

You mow the lawn 1 hour

You hang out sheets 1 hour

You take a brisk walk 1 hour

You swim 1 hour

You play tennis 1 hour

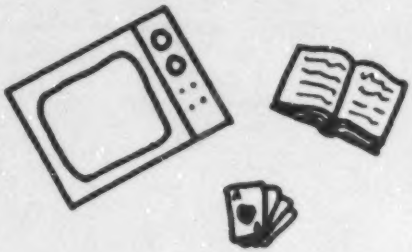
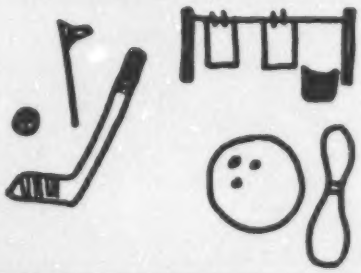
You do dancing 1 hour

You ski 1 hour

You jog 1 hour

You ride your bicycle rapidly 1 hour

You swept the floor 1 hour

ACTIVITY CATEGORY BOARD	Sedentary 	Light
Moderate	Vigorous 	Strenuous

FN 1.21e

50 Calorie Points	50 Calorie Points	100 Calorie Points	200 Calorie Points
50 Calorie Points	50 Calorie Points	100 Calorie Points	300 Calorie Points
50 Calorie Points	100 Calorie Points	200 Calorie Points	300 Calorie Points
50 Calorie Points	100 Calorie Points	200 Calorie Points	400 Calorie Points

FN 1.21e

NOTE: Add spinner to wheel.

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Master Clue Card

(each activity performed for 1 hour)

80-100 Calories

read a book
write letters
watch television
play cards
sew
listen to records

Sedentary

110-160 Calories

prepare dinner
walk slowly
iron clothes
dust furniture
type rapidly
fold laundry

Light

170-240 Calories

mop the kitchen
sweep the floor
scrub the bathroom
work in the flower garden
wash the car
hang wallpaper

Moderate

250-350 Calories

bowl
play golf
hoe the garden
mow the lawn
hang out sheets
walk briskly

Vigorous

More than 350 Calories

swim
play tennis
dance
ski
jog
ride a bicycle rapidly

Strenuous

FN 1.21e

FAST FOOD FARE

ARBY'S	CALORIES
Junior Roast Beef	240
Roast Beef	429
Turkey Sandwich with dressing	402
without Arby's dressing	337
Super Roast Beef	705
ARTHUR TREACHER'S FISH & CHIPS	
Fish, Chips and Coleslaw	
3-piece dinner	1100
2-piece dinner	908
BASKIN ROBBINS	
One scoop with cone	
Chocolate Fudge	229
French Vanilla	217
Rocky Road	204
Butter Pecan	195
Chocolate Mint	189
Jamoca	182
Fresh Strawberry	168
Fresh Peach	165
Mango Sherbet	132
Banana Daquiri ice	129
BURGER CHEF	
Hamburger	250
Double Hamburger	325
Super Chef	530
Big Chef	535
French Fries	240
Chocolate Shake	310
PIZZA HUT	
1/2 of a 10-inch (thin crust)	
Beef	488
Cheese	436
Pepperoni	459
Pork	466
Supreme	475

ZANTIGO	CALORIES
Taco	146
Tostado	209
Frijoles	231
Enchirito	391
Burrito	345
ARTHUR TREACHER'S	
Chips (per serving)	275
Coleslaw	122
Fish (2 pieces)	344
BURGER KING	
Whopper	630
Whopper Junior	285
Double Hamburger	325
Hamburger	252
Cheeseburger	305
Hot Dog	291
Whaler	744
French Fries	220
Shake, Chocolate	165
Chicken Delight	
(1/2 Chicken 4 pieces)	625
COLONEL SANDERS	
15-piece Bucket	3300
one drumstick	220
3-piece Special	660
Dinner (Chicken, Mashed potatoes, gravy & coleslaw)	
2-piece Original	595
2-piece Crispy	665
3-piece Original	830
3-piece Crispy	1070
WHITE CASTLE	
Hamburger	164
Cheeseburger	194
Fish Sandwich	200
French Fries	219
Onion Rings	341
Milk Shake	213
Cinnamon Roll	305
Cherry Roll	334

DAIRY QUEEN	CALORIES
Small Cone	110
Medium Cone	230
Large Cone	340
Small Dipped Cone	160
Medium Dipped Cone	310
Large Dipped Cone	450
Small Sundae	190
Medium Sundae	300
Large Sundae	430
Small Malt	400
Medium Malt	580
Large Malt	830
Hot Fudge Brownie Delight Sundae	580
Banana Split	580
Parfait	460
Dilly Bar	240
DQ Sandwich	190
Buster Bar	390
Super Brazier	850
Brazier Cheeseburger	310
Big Brazier Deluxe	540
Big Brazier	510
Brazier Dog	270
Super Brazier Dog	530
Brazier Chile Dog	330
Brazier	250
Bosn's Mate Fish Sandwish	340
Chicken Pack	342
French Fries	200
Onion Rings	300
Brazier Barbecue	280
Dipped Cones, Sundaes, Malts Shakes: Calorie listings are all for chocolate flavor	

DUNKIN' DONUTS	
Plain Cake Donut	240
Plain Honey-Dipped	260
Plain with White Icing	265
Plain with Chocolate Icing	235
Chocolate Cake	240
Chocolate Honey-Dipped	250
Yeast-Raised Donuts that have Jelly, custard, or cream fillings:	
Sugared	255
Honey-Dipped	275
(add 50 cal. for fillings)	
Plain coffee roll w/ Glaze	260
Sugared Bismarck	245
Bismarck w/ White Icing	270
Butternut Donut	220

HARDEE'S	CALORIES
Huskie Deluxe	525
Huskie Junior	475
Fish Sandwich	275
Hot Dog	255
French Fries	155
Milk Shake (8 oz.)	320
Apple Turnover	290

HOWARD JOHNSON'S	
Small Cone, Vanilla	186
Chocolate	195
Medium Cone, Vanilla	247
Chocolate	261
Large Cone, Vanilla	370
Chocolate	390
Sherbet	136
7-oz. pkg. Fried Clams	357
1/8 of Pecan Pie	474

McDONALD'S	
Egg McMuffin	312
Hotcakes, Sausage, Syrup	507
Hamburger	249
Double Hamburger	350
Cheeseburger	309
Quarter Pounder	309
Quarter Pounder w/ Cheese	521
Big Mac	557
Filet-O-Fish	406
French Fries	215
Hot Apple Pie	265
Chocolate Shake	317
Strawberry Shake	315
Vanilla Shake	322

PIZZA HUT	
Cheese Pizza:	
Individual - Thick Crust	1030
Thin Crust	1005
1/2 of 13-in. Thick Crust	900
1/2 of 15-in. Thick Crust	1200
1/2 of 13-in. Thin Crust	850
1/2 of 15-in. Thin Crust	1150

RED BARN	
Cheese Buster	707
French Fries	108
Shake	358
Salad	189
Apple Pie	217

FN 1.21e

LONG JOHN SILVER'S	CALORIES
Fish & Chips, Coleslaw	
2-piece Dinner	955
3-piece Dinner	1190
TACO-BELL	
Bean (Whipped) Burrito	345
Bell Burger	243
Enchirito	391
Frijoles	231
Taco	146
Tostado	206
GINO'S	
Apple Pie	198
Cheeseburger	336
Coke (regular)	117
Coke (giant)	181
Dinner Roll	51
Fry (regular)	195
Fry (giant)	274
Hamburger	289
Kentucky Fried Chicken (1-piece)	290
Orange (regular)	140
Orange (giant)	217
Root Beer (regular)	122
Root Beer (giant)	190
Shake, Vanilla (regular)	338
Sirloiner	514
Sirloiner (cheese)	609

FN 1.21e

FAST FOOD FATTIES

Directions: Complete the chart below and be prepared for class discussion.

Food	Calories	Cost	Alternatives
Arby's Roast Beef			
Burger King "Whopper"			
Kentucky Fried Chicken 3 piece dinner			
Dairy Queen Banana Split			
Dunkin' Donut - 2			
McDonald's Big Mac			
Taco Belle - Taco			
Fish'n Chips			
McDonald's French Fries			
Vanilla Milkshake			
Pizza Hut Pizza 2 slices			
Dairy Queen Onion Rings			

FN 1.21e

STUDENT SELF-CHECK WEIGHT CONTROL

Directions: Write true or false for the following statements on a separate sheet of p[illegible]r. Tell why false statements are wrong.

1. Weight control means keeping your weight down to the normal range.

2. The normal range for what you should weigh depends on your height, sex, and size of your frame.

3. It is the vitamins and minerals in food that cause you to gain weight.

4. A diet that includes the basic nutrients is the basis for both a diet to lose and gain weight.

5. The safest and most effective reducing diets are those that emphasize one type of food.

6. A teenager who has normal weight is likely to stay the same weight throughout adulthood by continuing with the same number of calories.

7. The normal weight for a small-framed person is higher than that for a person with a large frame.

8. Teenagers need more calories than adults.

9. Only people who need to lose weight need to be concerned about an exercise program.

WEIGHT CONTROL
KEY

1. False. Weight control means keeping within the normal range, which may mean gaining weight, losing weight, or maintaining present weight.

2. True

3. False. Vitamins and minerals do not have calories. Only fats, protein, and carbohydrates have calories. You will gain weight if you get more calories than your body uses.

4. True

5. False. Such diets are dangerous because they do not include many essential nutrients, and they may result in weight loss because of chemical reactions. Even though they may work fast, people cannot stand to stay on them long and gain weight again fast, since what was mainly lost may have been water.

6. False. Teenagers need more calories than adults. If they continue to eat the same number of calories, they will begin to gain weight in adulthood.

7. False. The skeletal frame of a large-boned person weighs more than that of a small-boned person to begin with.

8. True

9. False. A person who needs to gain weight will also benefit from exercise because it helps stimulate the appetite (except that people with anorexia nervosa often are very active even though they don't eat). People with normal weight can help keep it that way and have better muscle tone with exercise. People who need to lose weight can do so faster if they exercise along with reducing calories. Exercise helps convert food to muscle when the exercise involves pressure-resistance on the muscle, such as in lifting weights. Without pressure-resistant exercise any extra calories would cause a person to gain fat.

FN 1.21e

BROWN BAG LUNCHES

Directions: Bring in menus from fast food restaurants and newspaper grocery advertisements. Work in small groups for this activity. Each group should plan five nutritious restaurant lunches. Then using the grocery advertisements and the price lists from the restaurants, the students should determine:

1. the cost of the brown bag lunch for a week
2. the cost of the restaurant lunch for a week
3. the money saved by eating a "brown bag" lunch.

Each group should report their findings to the class.

Discuss:

1. Do you think there were fast food restaurants 20 or 30 years ago? (yes, Steak & Shake)

2. Do you think there were as many fast food restaurants 20 or 30 years ago as there are today?

3. Why are fast food restaurants so popular today?

4. Do you think there will be more fast food restaurants in the future?

5. Is eating at a fast food restaurant everyday for lunch compatible with voluntary simplicity?

Teacher Background Information: A nutritious lunch can be defined using the four food groups: Meat, Dairy, Bread & Cereal, and Fruit & Vegetable. Using the four food groups as a guide, a nutritious lunch for a teenager (ages 12-18) should contain:

FOOD GROUP	AMOUNT
Meat and/or alternate - choose one of the following:	
meat, poultry, fish	3 oz.
cheese	3 oz.
egg	1
cooked dry beans or peas	3/4 to 1¼ cups
peanut butter	4-5 tablespoons
Vegetable and/or Fruit (at least 2 different kinds)	1 to 1½ cups
Bread	1-3 slices
Dairy	1/2 pint of milk or equal amount of other dairy products.

Adapted from: Ruth Pestle, Project Director. Integrating Voluntary Simplicity of Lifestyle in Home Economics. Florida Department of Education, 1981.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Individual Problems/Weight

HOMEMAKING SKILLS

- Evaluate nutritional needs
- Identify nutritional components
- Examine diets and weight disorders
- Establish a physical fitness program

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Responsibility for weight	On the board, write the following statements. -- You are what you eat. -- Who is responsible for what you eat? -- Who is responsible for when you eat? -- Who is responsible for why you eat? Divide the class into buzz groups for a rapid response to the statements. Discuss the groups' observations.
	Weight factors and values	In pairs, choose one vignette. Identify the factors, values and goals affecting each vignette character. Examine alternatives and consequences. Share with class. -- Brenda's parents are both big boned and taller than average. Her mom is 5'9" and her dad is 6'4". Brenda is in the 11th grade, is 5'9", and weighs 165 pounds. -- Melissa craves soda pop, potato chips, cupcakes and tacos. Both her parents work the afternoon shift so Melissa eats out almost every night. She is 5'6" and weighs about 195 pounds. Often, all she will do is watch television for hours eating snacks and T.V. dinners. Melissa rarely exercises or gets involved with other activities. -- At least two days a week, Paul eats nothing because he is so tense and troubled. The senior wonders what will be the future of the world.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Weight factors and values (continued)	-- In hopes of maintaining his wrestling weight class, Mike earnestly works out five hours a day. He is so driven that he often misses meals and is exhausted most of the day, but continues to practice. At his last check-up, Mike weighed in at 119 pounds and he is 5'6". -- Rosa and Mario's mom is the best Italian cook in town. At least five days a week, mama prepares noodle dishes and urges Rosa and Mario to eat heartily and grow big and strong! -- Heather is very active in sports, clubs and church. She weighs 100 pounds and is 5'4". Her schedule is very hectic and she finds it difficult to eat properly and routinely. -- At birth, David stayed in the hospital longer than normal due to low body weight. His weight has always been a concern of David's parents. He has also been able to enjoy high calorie foods, but now as a high school student, his weight has skyrocketed. -- Nancy keeps a garbage bag under her bed to vomit in after periodic binges. Her friends are very concerned about Nancy's change in personality and appearance. Nancy thinks a size 3 is ideal for her 5'5" frame. -- Damon is the school hunk! His main goal is maintaining an Adonis physique, designer wardrobe and a shiny Corvette. Damon scrutinizes all food before eating and is critical of others eating habits. His preoccupation with his body has caused school grades to suffer and loss of true friendships. -- Sunshine, a vegetarian and health food advocate, packs her lunch of fruit and vegetables, wholewheat bread and nuts but often wonders if sufficient protein is consumed. When invited out with the gang, Sunshine will not eat any foods with preservatives -- many times not eating anything at social gatherings. She has also gained 10 pounds in the last year. Her older sister said this was due to a diet too high in carbohydrates and recommends lean beef and fish. Using resources, gather information on body types, underweight, overweight, obesity, ideal weight and eating disorders. Relate these to age, sex and body build. Develop a fact sheet for distribution to other students (see *Facts on Dieting). Recheck vignette suggested alternatives and consequences for additional suggestions after further study into the problem.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Develop a bulletin board to expand perception of the term "diet" -- "D-I-E-T A FOUR LETTER WORD? OR A WAY OF LIFE?"
	Fad diets	Using resources, pairs of students investigate common fad diets and analyze content for nutritional soundness. Report findings using *Fad Diet Fantasies and *Fad Diet Analysis.
		FHA/HERO - Do one or more of the following activities. -- Invite a resource speaker (dietitian, doctor) to speak on factors that affect size and acceptable ways to modify diet. -- Plan a field trip to spas, weight loss clinics. Evaluate program in terms of cost, results, suggested diet and exercise program. -- Request space in the school newspaper for a "Dear Diet Don" column to answer questions dealing with fitness and food. -- Sponsor a "Fitness Fair" at the local mall or in conjunction with a school function. Provide handouts on "diet" foods and exercise programs, as well as demonstrations.
	Behavior modification	-- Prepare a "thought for the day" for use on the school intercom, in a newsletter and school calendar. Examples of behavior modification thoughts: Always shop for food full. Better to waste than waist! (Throw away leftover food.) Think thin! Fitness is a lifetime commitment. -- Invite a representative from a weight control organization (Weight Watchers, Physician's Weight Loss, Diet Center) to discuss behavior modification. -- Have breakfast meetings with a "Start Your Day Right!" theme.
	Calorie planning	Given that 1 pound of fat equals 3500 calories, calculate what your favorite snack adds to your diet. For example, one 12 ounce can of pop equals 140 calories. 3500 ÷ 140 = 25. If you drank one can of pop a day above the number of calories you need, you would gain one pound of weight. After each student calculates a favorite snack, make a bar graph. Put in parent newsletter.
		Do *Food/Exercise Balance.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Divide the class into two groups and assign a specific number of calories for menu planning (1200, 2400). Give each student four white paper plates which are labeled: Breakfast, Lunch, Dinner and Snacks. Provide calorie count booklets, old magazines and/or computer programs for finding pictures of foods for each meal and snack which meet the Basic Four, RDA and the assigned calorie count requirements. Arrange selected food pictures on plates, writing the amount of each food to be eaten and the number of calories. Complete the attached discussion sheet *It All Counts! Share results round table style.
	Food adaptations/ modifications	Find recipes for several standard foods which can be adapted to lower the calorie content (potatoes, chicken, fruit desserts). Conduct laboratories in which part of the class prepares the regular recipes and others prepare "skinny" versions. Compare the products with regard to flavor, texture, appearance and calorie value. IEE - Do one or more of the following activities. -- Identify personal eating habits by keeping a log. Set dietary goals for increasing, decreasing or maintaining weight. Plan modification program. Evaluate results. -- Study anorexia nervosa or other severe eating disorders. Prepare a report. -- Interview several family members to determine what factors have influenced family eating patterns. -- Compile a card file of low calorie desserts. Prepare some for a tasting party. -- Analyze fast food meals. Develop posters suggesting ways to improve nutritional intake. Display. -- Visit a health food store. Compare prices and nutritive value to those of similar foods in a supermarket.
	Reflection	Describe the adult you would like to be in 15 years. Include items such as size, activities, overall appearance. What major considerations will need to be made to be this person? What impact will these considerations have on your present life-style? Plan a diet to enable you to reach this goal. Examine alternatives and consequences of following not following a plan. Use the following Test decisions.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Reflection (continued)	-- What would happen if everyone was health and fitness aware? -- Would my plan change if pregnancy occurred? Was handicapped? Moved to another country? -- Is my plan appropriate for others?

FN 1.21

FACTS ON DIETING

Sixteen percent of the present American population under the age of 30 can be classified as obese!

To lose one pound per week eat 3500 calories less than your body burns. By reducing your food intake 500 calories each day you can lose one pound a week.

Begin to change eating habits by recording:

1. What time you eat.
2. Everything you eat.
3. Where you eat.
4. Who is with you.
5. How you feel when you eat.

Analyze your answers. What things can you change? (Nutritionists have found people eat ten percent less when they write it down.)

Practical Plan to Lose Weight

1. Slow down! It takes 20 minutes for the message to travel from your stomach to your brain telling "you are full!"
2. Eat some food you like.
3. Eat a wide variety of foods from the basic food groups.
4. Do not spend extra money for special foods or gadgets.
5. Eat 3-5 times a day.
6. Eat fewer calories and/or get more exercise.
7. Learn some low calorie ways to select, prepare and eat foods.
8. Expect to make permanent changes in your eating habits.
9. Lose 1-2 pounds a week.
10. Control or plan snacking.
11. Control feelings that promote excess eating.
12. Avoid skipping meals!

Avoid Diets With The Following Points:

1. Simple magical foods rather than a well-rounded diet.
2. Promises of rapid weight loss.
3. Eating all the food desired, including foods high in calories that are particularly tempting to overweight people.
4. Beware of words such as "natural", "poisons" and "organic".
5. Calories are unimportant and have essentially nothing to do with weight loss or gain.

FN 1.21

SUMMARY

1. There are no magical cures.
2. In order to reduce weight, energy output must exceed food intake.
3. Too rapid weight loss can be dangerous and is often regained.
4. Weight loss diets must still be nutritionally balanced to maintain health and energy levels.
5. Weight loss programs must be consistent with person's lifestyle.

Source: West Virginia State Department. Adult Roles and Functions. 63.

FN 1.21

FAD DIET FANTASIES

Directions: Complete the chart below using the information you have found about fad diets. We have listed a few types of diets. Complete the chart by adding others you learn about.

Type of Diet	Nutritional Deficiencies	Advantages	Long Term Results
Grapefruit diet			
Fasting			
High protein diet			
Low-carbohydrate diet			

FN 1.21

FAD DIET ANALYSIS

Choose a fad diet that interests you. Use the guide provided below to analyze a diet.

Name of Diet:

Source of Diet:

Unique Characteristics of Diet:

Diet Procedures:

Overall Claims of Diet:

Evaluate the diet in terms of criteria listed below.

QUESTIONS	YES	NO	COMMENTS
1. Are all four food groups represented in adequate amounts?			
2. Are RDA requirements being met?			
3. Could it be harmful to health?			
4. Are specific time limits attached?			
5. Does it recommend an excessive reduction or increase in calories (more than 1000 calories)?			
6. Is it relatively inexpensive?			
7. Does it recommend a massive intake of vitamins or minerals (more than 10 times the RDA)?			
8. Does it consider ethnic and cultural food preferences?			

FOOD/EXERCISE BALANCE FN 1.21

Create a chart which illustrates the relationship between food intake and exercise for weight control given the following:

Number of calories per minute required to:

Lie down	1.2	Tennis	5.8
Study	1.5	Swim	6.8
Bicycle (5½ m.p.h.)	3.4	Basketball	7.3
Walk	4.2	Run (9 minute miles)	10.2
Dance	5.5		

Calculate the following: (Divide calories by number of calories per minute.)

MINUTES OF ACTIVITY TO BURN:

FOOD	LIE DOWN	STUDY	BICYCLE	WALK	DANCE	TENNIS	SWIM	BASKET-BALL	RUN
Cheeseburger (307 calories)	256	205	90	73	56	53	45	43	30

•99

FN 1.21

IT ALL COUNTS!

Given Calorie Requirement _____ Name _____

Place the recommended number of servings for you in the parenthesis beside the name of each group. Then list the foods chosen under the appropriate food group. Beside each food, list the amount to be eaten and the number of calories in this amount.

MEAT GROUP ( )	MILK GROUP ( )
Total Calories	Total Calories
FRUIT AND VEGETABLE GROUP ( )	BREAD AND CEREAL GROUP ( )
Total Calories	Total Calories

OTHER (JUNK FOOD!!??)	NUMBER OF CALORIES	
	Breakfast	_____
	Lunch	_____
Total Calories	Supper	_____
	Snacks	_____
	Total	

Answer the following questions about your menus.

1. Did you have trouble staying within the caloric requirement? Why?

2. Which types of foods had low calorie counts? High calorie counts?

3. Was any one food group generally lower in calories than the others? Which one?

4. Were your Basic Four requirements satisfied?

5. How would you change your menus to meet the requirements given?

6. How would you change your menus to lose weight? To gain weight? To maintain weight?

Adapted from Tennessee State Department. Family Living and Parenthood Education Guide.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Concerns Regarding Individual Problems/Special Concerns

HOMEMAKING SKILLS

- Identify special dietary/nutrition concerns
- Evaluate nutritional needs of family members
- Plan meals according to nutritional needs
- Recognize sources of reliable information

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Special concerns	Distribute a hidden word puzzle that includes numerous special diets or eating disorders or groups with special dietary requirements. Include the following: --Convalescents --Infants --Pregnancy --Lactation --Aged --Obesity --Health Food --Anorexia Nervosa --Anorexia Bulimia --Vegetarian --Liquid --Low-Cholesterol --Bland --High-Fiber --Low-Sodium --Diabetic --Soft Diet --Allergy Compare. Discuss how each is a "special concern" and why nutrition and proper diets are essential.
	Health problems may affect food needs	Consider the following situation. The Gibson family, traveling cross country in their RV this summer, are looking perplexed!! Here they are at the supermarket, ready to stock up on groceries, and what do they do? With a multi-generation family traveling together, the food needs are diverse. Let's take a look at the main players in this caravan.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Health problems may affect food needs (continued)	--Mike, the typical fourteen-year-old athlete, is the least of the worries -- Why, Mikey will eat anything, but especially likes junk food. --Sara, independent, responsible, and a diabetic has assumed the task of packing and purchasing her insulin and medication. For a 16-year-old, Sara will need usual self-control to pass up all the delicious foods encountered when traveling. --Traipsing through the Midwest with 15-month-old Derek, plus just learning of a new baby on the way, looms darkly ahead of Beth Anne "Thank goodness, we only have to go as far as St. Louis to meet Bob!" the Gibson family has heard Beth Anne lament numerous times! --Grandma Gibson has been slipping her brand new dentures out more and more. She just adjusted to a low carbohydrate diet and now it seems that a soft diet is in the future, also. She also thinks her face looks pinched due to her new dentures. --As the chief driver of the clan, Robert Gibson just hopes his blood pressure stays under control and the money and patience holds out until California. --Marilyn Gibson, 50 pounds overweight but energetic and optimistic, has set a goal -- she will return from this trip trim, slim, and able to wear her wedding dress at Bob's and her 25 year anniversary in September.
PROBLEM		What nutritional problems confront the Gibson family? List the situational factors, values and goals that play a significant role in the Gibson family nutritional decisions. What are the alternatives facing the family? Consequences for each alternative?
GOALS VALUES FACTORS ALTERNATIVES CONSEQUENCES		Using resources and based upon the Gibson's needs, plan sample menus for the trip.
	Life cycle	Prepare a bulletin board illustrating nutritional and dietary changes throughout the life cycle.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Life cycle (continued)	IEE --Using resources, select a problem from the examples stated or other areas for a report. Share with class. --Plan a dinner, meeting normal dietary needs. Show methods of alternating meal plan to meet needs of various special diets. --Interview a dietitian. Record information on special diets or disorders. --Prepare a food (rice) in several different ways and determine which diets may include that food. (Rice pudding, stir-fried rice, Spanish rice, steamed rice.) FHA/HERO -- Plan a field trip to a hospital, nursing home, a senior citizen home. Observe types of diets being prepared. Assist with meals. FHA/HERO -- Arrange a special awareness day by promoting low-sodium intake to reduce incidence of high blood pressure.
	Anorexia nervosa and anorexia bulima	In small groups, buzz to find out what is known about anorexia nervosa and anorexia bulimia. List on board. Using resources, add additional factors to list.
	Reliable sources of nutrition information	Distribute articles of nutrition information and special dietary concerns. Include reliable and unreliable sources. Discuss their credibility by responding to the following questions: "Six Points to Ponder". --Is the author a member of a recognized research group on nutrition? --Are the conclusions based on research rather than opinion? --Are the conclusions based on human studies, not animal or author's own case histories? --Does the author make extravagant claims for certain foods or products? --Does the author attack physicians, scientists or recognized nutrition authorities? --Does the author promise miracle cures or good health?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Seeking reliable information	Conduct a nutrition search session or write about a particular food concern to the following organizations. Request information. Use for a class display entitled "You Asked For It!" Refer to *You Asked For It.
	Action and Reflection	In small groups plan an appropriate day's menu for each special concern listed at beginning of module. Survey high school students to determine special dietary concerns. Examine school cafeteria menus. Plan alternative menus to accommodate the special diets. Present plan to cafeteria manager and suggest a trial run. Evaluate results.

FN 1.22

YOU ASKED FOR IT

Below are lists of scientific organizations and other sources that can be relied upon for valid nutrition information.

Scientific Organizations

American Medical Association
535 North Dearborn
Chicago, IL 60610

American Dietetic Association
430 North Michigan Avenue
Chicago, IL 60611

American Academy of Pediatrics
Box P
Post Office Box 1034
Evanston, IL 60204

Institute of Food Technologists
221 North LaSalle Street
Suite 2120
Chicago, IL 60601

National Academy of Sciences
2101 Constitution Avenue, N.W.
Washington, DC 20418

The Nutrition Foundation, Inc.
Office of Education & Public Affairs
888 Seventeenth Street, N.W.
Suite 300
Washington, DC 20006

Society for Nutrition Education
2140 Shattuck Avenue
Suite 1110
Berkeley, CA 94704

UNIPUB (Food and Agricultural Organization)
650 First Avenue
P.O. Box 433
Murray Hill Station
New York, NY 10016

World Health Organization
Q Corporation
49 Sheridan Avenue
Albany, NY 12210

Federation of American Societies for Experimental Biology
9650 Rockfield Pike
Bethesda, MD 20014

American Institute of Nutrition and American Society for Clinical Nutrition
9650 Rockfield Pike
Bethesda, MD 20014

Other Dependable Sources

American Home Economics Association
1600 Twentieth Street, N.W.
Washington, DC 20036

American Public Health Association
Food and Nutrition Section
1790 Broadway
New York, NY 10019

Food and Nutrition Board
National Research Council
2101 Constitution Avenue
Washington, DC 20037

Public Affairs Pamphlets
381 Park Avenue South
New York, NY 10016

U.S. Department of Agriculture (USDA)
Office of Information
Washington, DC 20250

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Individual Problems/Sports Nutrition

HOMEMAKING SKILLS

- Determine specific nutritional needs for the athlete
- Recognize the importance of fitness and nutrition for lifetime activity
- Plan meals and snacks appropriate for the athlete

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Facts and fallacies	Develop a bulletin board with the following title: "Sports, Nutrition, and You." Use pictures of a variety of athletic experiences...football player, swimmer, golfer, dancer, gymnast. Include both sexes, all ages and handicapped individuals. Combine with pictures of the Basic Four food groups. Discuss the relationship. To determine sports nutrition facts and fallacies, utilize a Sports Nutrition Scoreboard. Keep the answers for further reference. Example:

T	F	?	SCOREBOARD
			1. Athletes need more protein than non-athletes 2. Swimmers quickly become obese. 3. Wrestlers should fast to maintain desired weight. 4. Long-distance runners should eat a carbohydrate-loaded diet. 5. Milk drinking impairs performance. 6. Steak is the best source of protein for athletes. 7. .....

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Nutrition for the athlete... dietary goals	Using resources, develop a fact sheet of information dealing with sports nutrition. Include basic diets, dietary supplements, gaining or losing weight, energy demands of the athlete, water needs, pre-game meals and eating during competition and information on specific sports. Using resources, find the energy cost of various sports (climbing =13.2 calories per minute; football =8.9; cross country running = 10.6; swimming 11-14; wrestling = 14.2; skiing = 10.8 - 18.6.) Use *Sports Nutri-Bingo activity to review the facts. Select a sport. Plan an appropriate diet for the athlete involved. Share the nutritional plans via presentations, posters or displays. Consider the following situation. A 15-year-old swimmer is competing in the state meet. Due to parents' irregular working hours, they do not eat regular family meals. The family has a limited income, however the coach has recommended that at least 3,000 calories a day be consumed during the season plus 8 oz. of beef. A friend has recently read in Swimmer's Digest that a highly concentrated protein drink supplements the swimmer's diet. The swimmer prefers fast food fare, enjoys partying with friends and is concerned with appearance, health and doing well for the team.
PROBLEM	Factors and values	Identify dietary problems. What factors and values are involved (health, safety, self esteem, winning)?
GOALS VALUES FACTORS / ALTERNATIVES / CONSEQUENCES	Alternatives and consequences	As a class, generate alternatives and consequences for each problems. Example:

ALTERNATIVE	CONSEQUENCE	+ OR -
Follow coach's advice	Approval	+
	Expensive	-
	Large amount of protein may not be necessary	-

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Assuming responsibility for peer instruction	FHA/HERO -- Utilize FHA/HERO Student Body handbooks and arrange a student body workshop dealing with sports nutrition or start an aerobic dance class or take a sports/exercise break during your next chapter meeting with appropriate snacks.
	Community and home sports nutrition experiences	Evaluate school lunches or fast food restaurants and see how they fit into the overall nutritional needs of the athlete. Prepare a variety of liquid nutritional drinks. Evaluate for taste, convenience and nutrition. Plan and prepare a weekly diet suitable to the athlete. Survey health clubs, spas, recreation centers to determine services available in regards to sports nutrition/fitness.
	Lifetime sports nutrition	Discuss how a lifetime interest in sports and nutrition can start today. Consider the positive aspects of continued emphasis. (Good emotional safety valve, feeling of accomplishment, social implications, challenge, creative use of leisure time, reduces heart disease, mentally alert, aids in weight control.)
	Action	Develop a plan of action. What can be done to promote nutrition and fitness today and tomorrow? Consider self, family and society. --Personal plan. --Write a newspaper article. --Develop a 30-second radio spot or use on school intercom. --Instruct grade school students on the importance of fitness and nutrition. (Play fitness games and use food models to illustrate dietary requirements or develop skits.) --Conduct a sports nutrition slogan contest. --Visit a health food store and compare foods designed for athletics. --Survey athletes on food choices -- use as a basis for information for a school assembly. --Plan a sports nutrition food fair -- display and demonstrate pre-game meals.

FN 1.23

SPORTS NUTRI-BINGO

This game may be used as an evaluation or review device. Prepare Bingo-type boards (one per player) with 25 squares. Each square has a sports symbol (e.g., tennis racket, running shoes, stop watch). All boards are different. Tokens or small pieces of paper are used to cover the squares as the game is played. Make a deck of cards with the sports symbols selected. Make another deck with questions about sports nutrition written on them.

RULES:

Place both decks face down on the table. Give each player a Sports Nutri-Bingo board. Select the first player by having each one draw a card. The one with the highest number plays first.

The players draw a card from each deck. If their board contains that card, e.g. tennis racket, they may answer the question on the question card. If they answer correctly, they may cover that square. (The teacher determines whether they answer correctly or not.) If they fail to answer, the cards are placed in separate stacks for later use.

If the players do not have the drawn card on their boards, they pass both cards to the next player, which will constitute the next draw.

If players draw Jokers, this entitles them to cover the center square regardless of what card symbol is shown.

The winner is the first to Bingo by covering five squares in a row on the board, either vertically, horizontally or diagonally.

At any turn, the players may request the opportunity to draw an extra card from the stack of question cards that have been missed. If they succeed in answering, they may cover any square on their board except the center or corner squares.

NEEDED:

Bingo-type boards (one per player)
Symbol cards
Question cards
Markers

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PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do To Be Well Nourished?
CONCERN/CONCEPT	Individual Problems/Pregnancy and Lactation

HOMEMAKING SKILLS

- Evaluate nutritional needs of pregnant lactating women
- Plan meals and snacks
- Determine resources available in the area of pregnancy and lactation
- Identify nutrients required for fetal development

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Prepare a transparency, poster, or bulletin board centering on relationship of nutrition to pregnancy entitled "Be Good to Your Baby Before It Is Born" or "Child Abuse May begin Before Birth." Include statistics and statements such as: Malnutrition before birth = few brain cells low birth weight premature babies. Realistic Weight Gain = 25 lbs. Alcohol Consumption = birth defects. Junk Food = lack of recommended vitamins and minerals necessary to growth. Read the following vignettes. --Newlyweds Debbie and Brent had an eventful summer...college graduation, newly-commissioned Air Force officers, a move to a new state, and an unexpected positive pregnancy test! --Marsha, 15-year-old high school student, has been starting the day vomiting and fears that her summer romance has left a lasting impression. --Mark receives an excited call from his wife, a 37-year-old career woman -- the doctor has confirmed that their first baby will be born in January.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		--After a difficult first pregnancy, delivery and postnatal recovery, Sandi and Bob vow to follow all the rules for their second baby -- no alcohol or drugs, only a 25-pound weight gain, and no junk food!! --With food stamps in hand, Carla wonders how she can stretch them to adequately nourish her two preschool children, laid-off construction worker husband, and her unborn child.
PROBLEM		What are the practical problems in these situations related to nutrition and pregnancy? List on the board for further discussion.
	Nutritional needs	Using resources gather information on the importance of a balanced diet before, during and after pregnancy. Use building block "How to build a perfect baby!" or chain strategy "A chain is only as strong as it's weakest link" or plan a lifeline of fetal development to highlight nutritional needs.
	Facts and fallacies	Develop a "Don't You Believe It!" handout with space available for additional nutrition fallacies. Discuss and correct the fallacies.

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Don't You Believe It!

IT'S JUST NOT TRUE THAT:

You always get fat when you're having a baby;
You can tell whether you are going to have a boy or a girl by the way the unborn baby is carried;
You lose a tooth for every baby;
Drinking wine makes good blood;
The baby will "stick to your back" if you sleep a lot;
Lemons, oranges, or grapefruit are too "acid" and bad for you;
What you look at will "mark" the baby;
Cheese and milk will make you constipated;
A fall or blow will surely bring on a miscarriage;

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Facts and fallacies (continued)	What you eat or drink doesn't matter; It doesn't matter how much salt you use; Margarine is not as fattening as butter; A shock like a death in the family will bring on early labor. Add Additional Fallacies
		Arrange a panel discussion of expectant and new mothers to discuss nutrition during and after the birth or conduct out of class interviews. Report findings.
	Values, factors, goals	Refer to vignettes. What are the values, factors, goals involved in each? Ask students to relate other situations that they know about. Discuss.
	Alternatives and consequences	What alternatives are available to each expectant family? What are the consequences of each alternative generated to the infant, the mother, the family and society as a whole? Case Study # Alternative Consequence: Baby Mother Family Society

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Special concerns	In groups, compose a dictionary of terms relating to pregnancy. Include special concerns that may be affected by nutrition (hemorrhoids, constipation, toxemia, edema). FHA/HERO --Conduct a peer education project to inform teens of nutritional needs of young mothers. --Plan a field trip to community facilities such as: prenatal clinics, prenatal care classes, programs which serve teenage mothers. --Research the V.H.E. unit available to many schools dealing with adolescent pregnancy and parenting -- GRADS (Graduation, Reality, and Dual Role Skills). --Assist in gathering resources -- pamphlets, books, films, to enhance the study of nutrition, pregnancy, and lactation. --Use county fair booth to pass along information (bookmarks, pamphlets, fact sheets). --Contact Head Start centers or nursery schools to arrange time to give parents information. IEE -- Prepare lapel buttons for teachers and/or students:

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Special concerns (continued)	--Research and report on birth defects. --Develop a resource book of facts and community agencies for the expectant teenage parent. Make available to guidance counselors, health centers and others. --Develop an FHA/HERO Coping with Crisis presentation or Informative Speech on pregnancy and nutrition. --Attend a LaLeche League meeting. Report. --Plan a week low-cost/high nutrition diet for the low income mother. Evaluate for variety, cost, preparation skills needed, time and nutritional value.
	Weight gain	Debate the "eating for two" issue. Consider the 25 lb. suggested weight gain and the following exact weight breakdown. --7 ½ lbs. baby --1 lb placenta --2 lbs. increased muscle mass of the uterus --1 ½ lbs. enlargement of breat tissue --3 ½ lbs. increased blood volume --6 ½ lbs. increased tissue and stored body fat Study *See the Difference chart. Why do the differences exist? Develop cartoons about diet and pregnancy. Post in classroom.
	Menu planning	Based on vignettes or other situations generated in class, plan menus (vegetarian, low income, regular diet) for the pregnant woman (chalkboard, large sheets of newsprint, transparencies). Explain reasons for choices.
	Breast-feeding	Using resources, gather information on breast-feeding. Modify diets developed previously to meet the needs of the lactating mother. Invite a guest speaker from the LaLeche League to address class on the breast vs. bottle issue.

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Reflection	List decisions that must be made by expectant families. Using vignettes at beginning of module, apply practical reasoning process and test decision: --What if every pregnant person did this? (Universal test) --What if you were the fetus? (Role Reversal test) --What if you were 35 years old? 16 years old? (New Case test) --What if you were the mother of a future president of the U.S.? (New Case test) --Would this be workable....if you had a low income?....moderate income?...if...? --What obligation do we have to ourselves and others to encourage eating safe, balanced, nutritious meals during pregnancy? --What can be done to encourage other pregnant girls and women to eat safely during pregnancy?

84.

SEE THE DIFFERENCE

Nutrients	Nonpregnant Teenager 14-18 yrs.	Pregnant Teenager 14-18 yrs.	Nonpregnant Woman 25 yrs.	Pregnant Woman 25 yrs.
Calories	2,100	2,400	2,000	2,300
Protein (Gm.)	48	78	46	76
Calcium (Gm.)	1.2	1.6	.8	1.2
Iron (mg.)	18	18	18	18
Vitamin A (I.U.)	4,000	5,000	4,000	5,000
Thiamine (mg.)	1.1	1.4	1.0	1.3
Riboflavin (mg.)	1.4	1.7	1.2	1.5
Ascorbic Acid (mg.)	45	60	45	60
Vitamin D (I.U.)	400	400	—	400

SOURCE: National Research Council, 1974.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do As A World Citizen Regarding Food?
CONCERN/CONCEPT	World Food Supply/Population Growth and Hunger in the World

HOMEMAKING SKILLS

- Identify efficient sources of protein
- Identify action choices to improve world hunger situation

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Aggregate food consumption in the United States	Investigate food consumption patterns of Americans. Make posters showing this pattern. (Include specifics such as 125 pounds of sugar or 300 cans of soda pop.) Compare with the national dietary goals. Put on school bulletin boards. Using resources find pictures and articles illustrating malnourishment or food distribution problems in Third World countries. Mount these on posters. Put side by side with posters showing food consumption patterns of Americans. Draw conclusions. Keep posters on walls until end of module.
	Food problems resulting from overpopulation	Using resources (films, filmstrips, current periodicals) answer the following questions. --What is overpopulation? --Can the world avoid overpopulation? --Why do we have overpopulation? --Will the U.S.A. ever become overpopulated? --Is there a relationship between overpopulation and world hunger? --What is responsible for the hunger? --How could hunger be eliminated? --How do your eating habits affect other people? --What are some relief programs? --Who is going hungry? --What country produces a surplus? What are their obligations?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Sources of information	In small groups, write letters to obtain current information on population growth and world hunger: --Food and Agriculture Organization (FAO) via delle Terme di Caracalla Rome 00100, Italy --International Planned Parenthood Federation 18-20 Lower Regent Street London SW1Y 4PW --Population Reference Bureau, Inc. 1755 Massachusetts Ave., N.W. Washington, D.C. 20036 --Transnational Institute Institute for Policy Studies 1901 Q Street, N.W. Washington, D.C. 20009 --UNICEF News Unicef Information Division United Nations New York, N.Y. 10017 --AHEA International --WHO - World Health Organization --UNESCO - United Nations Educational, Scientific and Cultural Organization --The Nutrition Foundation --The Agriculture Research Service -- U.S. Department of Agriculture

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Sources of information (continued)	--Food and Nutrition Board of National Research Council --CARE (Cooperative for American Relief Everywhere) --American Red Cross --Ford Foundation --Rockefeller Foundation Summarize and share with class.
	Relationship between population density and world food supply	--Make a transparency of a world map, indicating the major sources of grain and protein. Superimpose population figures of each country on the map. Discuss the relationship between population density and world food supply. Discuss the different ways technologically and politically, the discrepancy between population and food supply could be minimized (improvement of agricultural methods, cooperation between countries for mutual benefit, rapid distribution of high-protein foods).
	Effects of malnutrition	Using resources, identify the various effects of malnutrition in its mild and severe forms, focusing on one or more specific situations: pregnant women, infants, the aged, grade school children. Using references, prepare tables or graphs showing numbers of "hungry people" in the world. --Study the different forms of malnutrition and prepare a list of questions for the medical authority to answer. --Invite a medical authority to talk about the effects of malnutrition, both physiological and psychological. Create a display case showing malnutrition problems of one country or several countries, stimulating school awareness of the world food problem.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Effects of malnutrition (continued)	Brainstorm alternatives to hunger and overpopulation. Collect recipes that are protein efficient. Create a meatless main dish that is nutritious. Plan protein efficient meals. Write a position paper, based on research, on the solution to world hunger. Consider self, family and society. Discuss. (See FN Module 2.22)
	Reflection	Read *Letter From a Peace Corps Volunteer. Individually compare your answers to the questions asked Kim.

90.

FN 2.11

LETTER FROM A PEACE CORPS VOLUNTEER*

Sawahrejo, Indonesia

Dear Bob,

Since I haven't written to you in so long, I thought you might want to share this letter with your classmates. They might also like to know what life is like in the Peace Corps.

As you know, I am working on the island of Java, part of the country of Indonesia. Java is very mountainous, with many volcanoes and rich valleys where crops grow easily. As I look out from the window of my house, as the sun goes down over the mountains, I can agree with the Javanese people that this is truly a beautiful place.

Unfortunately, Java is a place not only of beauty. In the village of Sawahrejo where I live, there are 2,000 people who live closely packed together in very small houses. And the population here is growing very rapidly. Most of the villagers own very little land or no land at all. Even though the land is fertile, there are too many people trying to work a tiny plot and there is not enough food for everyone. To give you an idea of how dense the population is here, if the United States were as densely populated as Java is, it would have more population than the entire world now does. Not only are the people crowded together on the land, but there are very few jobs available for people who need to work to buy food for their families.

Recently, I met a boy about 11 or 12 years old named Kim. He lives with his mother and father, three sisters, and one brother. He had two other brothers, but they died of starvation when they were young. I asked him some questions about his life here.

Me: "What does your family eat?"
Kim: "We eat rice mostly but sometimes fruit or cassava." (Cassava is a filling, but not very nutritional root.)
Me: "How many times a day do you eat?"
Kim: "Sometimes twice but usually only once, in the evening. It depends on how much food we have.
Me: "What do you like to eat?"
Kim: "We own about 900 square meters (one-fifth of an acre) where we grow most of the food to feed our family. My father buys a little food, but he is able to work only about one-third of the year, so we don't have much extra money."
Me: "Does your mother prepare all the food you eat?"
Kim: "Yes, my mother cooks rice and fruit, if there is any." (Of course, Kim's family does not have a refrigerator.)
Me: "How much do you weigh?"
Kim: "Thirty-five kilos." (I later discovered he weighs 31 kilograms--less than 70 pounds.)

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Kim and his family have the same problem as most of the other people here. I found out that Kim's family can grow 500 pounds of rice on their small piece of land in a good year. His father is able to buy seeds and only about nine pounds of fertilizer with the little money he has available. Most of the people in the United States put far more fertilizer than that on their lawns each year.

I must end this letter so that it can be sent out today, but I thought your class might like to try answering the questions I asked Kim and, then, comparing your answers with his answers. I would be interested in the results.

Love,

Karen

*Ohio Department of Education, Division of Elementary and Secondary Education.

PERENNIAL PROBLEM — What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM — What Should I Do As a World Citizen Regarding Food?

CONCERN/CONCEPT — World Food Supply/Food System

HOMEMAKING SKILLS

* Explain the relationship of world food production and distribution

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Prepare exhibits or bulletin boards with map(s) of the world, illustrating: 1) Staple foods of regions or countries, (West Africa -- cassava; Southeast Asia -- rice; South Africa -- maize (corn). 2) Sources of favorite or "exotic" foods. (Kiwi fruit, papaya, tapioca, chocolate, pineapple, bananas, mango.) 3) Major food exports/imports of selected countries. (U.S.A., Japan, India, Nigeria, United Kingdom.)
	Expansion of food production awareness	
	Food chain	Select a food you've eaten recently or seen in a store. Investigate and diagram the steps the food takes from the field to the table. Analyze the food chain by answering the following questions: --How many steps did your food go through from field to table? --What points in the "journey" do you think require much energy (electric, oil)? --Which points require much human labor? --What types of workers are responsible for producing the food? What resources are used?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food production/ distribution	Using resources, find answers to these questions. --What foods are imported to the U.S. from other countries? --What foods are exported from the U.S. to other countries? --What are the steps a food goes through to be imported and exported into/from the U.S. from another country? --Does an imported food have different treatment to be distributed throughout the U.S.? --What are the steps a food goes through for inter/intrastate distribution? --How are different foods produced and processed? --What are the differences in processing of the same food in other countries? --What are the different forms of transportation used to distribute foods in a different country? --How is the labeling of a food in another country handled differently than in the U.S.? --How does the cost of energy play a part in the production and distribution costs? --What are new developments in food?
PROBLEM	Problems related to producing and distributing of world food supply	Bring an imported food product to class. Read the label. Prepare a dessert to serve about 2/3 of the class. Assign students number one, two or three, representing first, second, and third world countries. The students assigned number one are invited to take as much as they want. The number two's are the invited to the table, followed by the number three's. Individually write a reaction paper. Share thoughts and feelings. Summarize your individual responsibilities for resource use. Alternatives to the above activity: Plan a potluck dinner with rice. Remove the meat course before the number two's serve themselves. Remove everything but rice and bread before the three's serve themselves. Analyze the activity as above. (Adapted from M. Baumert, Illinois Teacher, Nov.-Dec., 1983).

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Invite a panel of community people with direct professional or personal experience in other countries. Request them to respond to questions regarding production, distribution, hunger situation.
	Food in the future	Prepare a list of quotes from futurist books (Toffler's The Third Wave) regarding food in the future. Share with class.
		Using references, books or magazine articles, develop a list of changes in foods of the future. Categorize based on --where they will be grown/produced. --types of food. --food for space travellers. --food produced on space stations.
		What people or institutions actually make decisions about new food research? What would you consider research priorities? Why? Should these be given more attention and funds?
		Identify sources of information that can assist in keeping abreast of world food production and distribution. Write a letter to yourself and include three commitments to strive for in relation to concerns regarding the world food supply/food system. (Lobby for bottle/litter legislation, conserve natural resources, grow a garden, recycle.) Give to teacher. After several weeks, teacher delivers the letter to the student. Discuss status of commitments. Relate to self, family and society. Utilize the universal test, role reversal test, new situation test.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do As A World Citizen Regarding Food?
CONCERN/CONCEPT	Political and Economic Ramifications of Food Policy/Governmental Food Policy

HOMEMAKING SKILLS

- Identify issues involved in local food policies
- Evaluate local resources to assist families with food needs
- Determine budget and meal plan with limited resources

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Collect clippings related to hunger in your community. What resources are available to families?
	Community resources	FHA/HERO - Invite representatives from food pantry, community center, food stamp program, meals-on-wheels or visit these programs. Plan an IEE or FHA/HERO community service project with one of the programs. Read *At What Price.
	Local food policy issues	From resource persons and article "At What Price", identify issues involved in local food policies. --Are the eligibility requirements for food stamps eliminating needy recipients? --Is the amount for food stamps adequate? --Is there adequate financing for meals-on-wheels? --Do qualified people get meals-on-wheels? --Are the church food pantries adequately stocked? In small groups research one program in-depth. Present findings to class. This may include samples of menus or preparation of a meal using a food pantry allotment.
PROBLEM	Food stamp allotments	Debate, "Should we increase taxes in order to raise the allotment for food stamps?" Record responses and save. Collect factual information to support their positions.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food stamp allotments (continued)	Determine a weekly food budget for a family of four on food stamps. Plan a balanced diet for a family of four for one week using the food stamp allotment. Discuss the following. --How do/would you feel eating on a limited allowance? --How much time and effort were required to plan menus on this budget? --Are the meals nutritious? --How would you feel about living at this level indefinitely? Read responses from food stamp debate. Discuss if there are any changes as a result of the class project.
		Identify factors which contribute to higher food costs for low income residents. --Prices higher in inner city markets. --Inadequate storage (may have to purchase food daily, not take advantage of sales). --Inflation has greater effect on poor because they spend a greater percentage of income on food. --Inadequate cooking facilities.
	School food policy	Select five class members to represent your local school board. In six small groups, using resources, prepare testimony for or against installation of candy and pop vending machines. Group 1 - Represent candy suppliers Group 2 - Represent pop suppliers Group 3 - Represent dentists Group 4 - Represent nutritionists Group 5 - Represent students Group 6 - Represent parents
		As testimony is given, maintain record of factual claims and value claims. What is the basis for the factual claims? What was the reasoning given by the school board for their decision? (Refer to *Controversial Junk Food Rule Draws Fire.)

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Hunger in America	Read *Once Again Hunger Troubles America. Identify all the issues raised in the article which relate to food policy. Identify the people described and their situations. How would you feel if you were that person? What alternatives are available to the person in that situation? Read *Poverty Groups Parallel High Risk Populations. List key facts. Make generalizations about the relationship of poverty and nutrition. Individually, respond to the following. --Given the fact that there are large numbers of hungry people in America, I believe that our government should . . . --As an individual I could . . . Give reasons to justify your suggestions.
PROBLEM PR	Moral and economic implications of U.S. food policy	Read this case study and respond. --Some American manufacturers of infant formula have aggressively marketed their products to Third World mothers. However, often the mothers do not understand or lack clean water or equipment to use the formula. They may run out of money to buy the formula and have lost their ability to nurse. One anti-formula group, "Infact", has estimated that 10 million infants die annually from diseases related to bottle feeding. However, selling food abroad is a major contributor to the American economy. Use practical reasoning process to discuss what you as an American citizen should do regarding this problem. Consider the influence of technology, the economy and social and moral concerns.

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Update on Federal Assistance Programs

Both the cost and the efficacy of federal food and nutrition programs have been matters of extensive political debate. Critics attack and supporters defend the programs with regard to fraud and abuse, program overlap, inflated bureaucracy and the basic concept of entitlement itself. Politics and judgments aside, the following figures illustrate the dramatic growth of food and nutrition programs over the past 10-15 years:

1. Food Stamps - started on a pilot basis in 1961, serving 151,000 people at a cost to the government of $14.1 million. At its peak in 1980, the program served 22.5 million people at a cost of $11.3 billion.

2. School Lunch - was first authorized in 1946, but its period of rapid growth occurred during the 70's. From a $204 million budget in 1969, NSLP expanded to more than $3 billion in 1980, serving 27 million children on an average school day - about 55% of all children enrolled in elementary and secondary schools. About 45% of the participants received free or reduced-price lunches. The current administration has cut the budget to $2.4 billion by reducing meal subsidies and tightening eligibility standards.

3. School Breakfast - began as a pilot program in 1966 and was permanently authorized in 1975. Its budget increased from $5.4 million in 1969 to $312 million in 1982. More than 88% of its 3 million participants received free breakfasts in 1982.

4. WIC* - began in 1974 with expenditures of $10.4 million and served an average 88,000 people monthly. By 1982 WIC's caseload had increased to 2.2 million and its budget to about $1 billion.

In addition to these major programs, there have been several smaller food and nutrition programs including elderly feeding (peak budget $202 million), summer food service for children (serving 3 million children in 1979 at a cost of $250 million), NET or the Nutrition Education and Training Program, the nutritional component of Head Start and agricultural commodities distribution.

*WIC is not considered a major program in terms of cost, but rather a key program in terms of cost-effectiveness and the particular population it serves.

Source: Vitamin Nutrition Information Service.

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CONTROVERSIAL JUNK FOOD RULE DRAWS FIRE

By

Marian Burros

The Department of Agriculture's controversial "junk food" regulation governing what can be sold in school vending machines will be in the courts before it is ever in force.

The regulation was announced last Friday, and the only reason the first court challenge wasn't filed the same day was because the regulation wasn't signed until after the courts had closed for the weekend.

On Monday a consumer coalition led by the Community Nutrition Institute (CNI) asked that the regulation be amended to get rid of the "loopholes" and make it "consistent with the intent of Congress." According to CNI's Ellen Haas, Congress wants the foods sold in schools to "make a nutritional contribution to the diet and dietary habits."

Haas says the current regulation permits the sale of many foods that do not meet these criteria.

The new regulation is NSDA's second attempt to control the kinds of foods children can eat in school which compete directly with what is served in the school lunch program. These are the foods usually sold in vending machines.

The new ban covers soda pop. water ices, chewing gum and candies such as marshmallows, corn candy and hard candies--but candies that contain chocolate, for example, would not be banned. Potato chips, pretzels, fruit-flavored juice drinks, even such products as Kool-Aid, are not included in the ban.

Any food that contains 5 percent of the recommended daily allowance of just one of eight nutrients is deemed acceptable under the new regulation.

Asked if a manufacturer couldn't simply fortify food or drink with 5 percent of any single nutrient and then qualify, Assistant Agriculture Secretary Carol Foreman said the new FDA proposal on food fortification will make that impossible.

FDA has just announced a proposal governing the fortification of foods. According to the proposal: "FDA...believes it is inappropriate to fortify snack foods such as candies and carbonated beverages."

The USDA regulation is scheduled to take effect July 1, 1980, which means that schools would have to comply by the beginning of the next school year. But court challenges may delay implementation.

Source: The Washington Post, January 31, 1980.

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Once Again, Hunger Troubles America

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By Elin Schoen

"I never thought this could happen," Frank said softly. He had temporarily forgotten the embarrassment of being at the Center for Food Action in suburban Bergen County, New Jersey, waiting for free groceries. Frank, 46, had requested that his real name not be used, and, promised anonymity, he talked freely, his luminous black eyes enraged at times, at other times sad, bewildered or resigned. "All the years I've saved, and what I've done in life — I did a little traveling and everything — and it just, it just went that way," said Frank. "I just can't believe it, you know. I've never been like this in my life."

Although Frank was taking home $824 a month (or $9,888 a year) as a machinist, he found himself with little money for food, clothing and gasoline, because his rent and utilities (more than $500 a month) and medical bills usurped most of his income. His 44-year-old wife cannot work because she has impaired vision.

On several occasions last year, Frank and his wife were unable to buy food. A priest referred them to the Center for Food Action, a five-year-old privately funded agency that rents its basement office space from the West Side Presbyterian Church. At times, Frank and his wife had nothing to eat except the canned goods the center gave them — Spam, macaroni and cheese, spaghetti.

The stress of trying to cope took a toll on Frank's health, according to Adele Haloch-La Tourette, who as advocacy director of the center acts as liaison between clients and various governmental agencies. Recently, Frank became seriously ill and had to leave his job. Because he received payment of $260 in workmen's compensation, he could not qualify for welfare. Today he and his wife are living on food stamps and charity.

Mrs. Haloch-La Tourette calls Frank and his wife "typical of about one-third of the families who seek food assistance these days" — "the new poor," "people who were making it five years ago." Some of them own their homes and are paying their mortgages with money that would otherwise buy food. Some come in once and are never heard from again; many, like Frank and his wife, become regular clients. The center, which once served mainly "the hard-core poor" and people hit by one-time emergencies (fires, floods), now tries to help these new arrivals find solutions for the continual emergencies that their lives have become. Too often, there are no solutions. The groceries are a mere Band-Aid in view of clients' unending need.

This winter, as Frank and his wife face the threat of hunger for the first time in their lives, many Americans are learning that hunger is not an issue confined to the developing world. Hunger and poverty are inextricably linked, and although no one knows precisely how many Americans are going hungry or how many are malnourished, there is evidence that, as poverty is increasing, so is hunger. A sluggish economy and the highest unemployment rate since the Depression have aggravated the hardships of the poor and added to their ranks. And according to many experts, the Reagan Administration's budget cuts have also hurt the poor. Yet, this month, the Administration is expected to target poverty programs for further reductions in its 1984 budget.

□

It is in the food pantries and feeding centers around the country that the dimensions of the hunger problem appear in sharp relief. "We're like another arm of welfare," says Karen Akhtar, a volunteer and chairman of the board of the Yorkville Common Pantry in the basement of the Church of the Holy Trinity on New York City's Upper East Side. Because of a threefold rise in clients over the last year, the pantry recently opened a soup kitchen.

No lines are permitted to form outside the pantry — "The neighbors don't like it," says Mrs. Akhtar. Instead, clients join the indoor stairway long before the pantry opens, waiting for two- to three-day supplies of groceries that tide them over because their welfare or food-stamp benefits have been delayed, reduced, stolen or cut off mistakenly or as a result of the new Federal retrenchment. Or they come because they have been laid off, fired or their wages are insufficient. Some refer to it as the "end of the month syndrome," when cash or food stamps have been exhausted well before the next month's funds arrive.

The numbers of people appearing at church-operated emergency food centers nationally have increased from 40 percent at some facilities to 600 percent at others during the past year, according to the Rev. Neill Richards, coordinator of United Church of Christ-World Hunger Action. The Chicago Food Depository serves 375 local charities, with another 280 on a waiting list. On 14th Street in Washington, nine blocks from the White House, Bread for the City hands out canned and packaged foods to more than 800 people a month — 25 percent more than last year.

In St. Louis, the nonprofit, privately funded Operation Search supplies 50 of the city's more than 200 pantries with donated food. "What concerns me," says Bo Axelrod, its executive director, "is not so much how many we're feeding as how many we're missing." Beyond the problem of too few pantries in the poorest neighborhoods, many people do not know about them or are reluctant to go to strangers for help.

The increase in food theft further illustrates the

Since the 1960's - when America declared war on poverty - malnutrition and the severe diseases associated with it have abated. But today, the subtler forms of hunger that inevitably accompany poverty persist - exacerbated by a faltering economy and budget cuts.

Elin Schoen is the author of "Tales of an All-Night Town," an account of life in a poor Illinois community, and often writes on social issues.

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plight of the poor. The incidence of shoplifting by the elderly from supermarkets in New York City has risen 35 percent to 38 percent over the last two years, according to Jack Squicciarini, director of security for the Red Apple supermarket chain and coordinator and chairman of the Supermarkets Security Council in New York City. "In ghetto neighborhoods, the percentage is even higher," Squicciarini says. "We've apprehended people with social security checks of $63 a month. In a way, you can't blame them for stealing food. How they're supposed to live I don't know." Squicciarini also tells of 8-, 9- and 10-year-olds who have been caught pilfering supermarket shelves — with the approval of their parents. "People are hurting. I could show you stores up in the South Bronx where our garbage goes out at night and, within a minute, 40 people are going through the garbage. It becomes leveled." Squicciarini says that such foraging has progressed to more affluent areas of the city.

Hunger in America has changed considerably since the late 1960's, when a team of doctors sponsored by the Field Foundation, a nonprofit research organization, discovered cases of kwashiorkor and other starvation-related diseases in the Mississippi Delta and other impoverished areas of the South and Southwest. When a second team toured those areas in 1977, it observed "far fewer grossly malnourished people," but noted that, although Federal food programs had wrought "enormous progress," they still met "only the barest subsistence needs" of recipients. The doctors asserted that the programs reached only about half of the people who needed them. They concluded that hunger in America persists, but that the issue of malnutrition had become "a subtler problem."

Dr. Mitchel B. Wallerstein, associate director of the International Food and Nutrition Program at the Massachusetts Institute of Technology, explains, "Here, as in the developing world, the poor have no voice. Also, most people who are undernourished don't come in to clinics. It's very difficult to say, 'Cut the poverty programs and you'll have X cases of malnutrition.' I have every reason to suspect we'll be seeing more cases of malnutrition. But we won't be able to document this unless a lot of money is put into studies, which this Administration probably won't be willing to do."

Today, growth stunting and iron-deficiency anemia are the major indices of malnutrition in the United States. Iron-deficiency anemia is of particular concern, experts say, since it may interfere with both cognitive performance and resistance to disease. Despite a dozen or more years of Federal nutrition programs, the national incidence of growth stunting and iron-deficiency anemia among poor children has not changed substantially, according to Arnold E. Schaefer, executive director of the Swanson Center for Nutrition Inc. in Omaha, Neb.

Dr. Frederick L. Trowbridge, director of the nutrition division of the Center for Health Promotion and Education, Centers for Disease Control, United States Public Health Service in Atlanta, Ga., cites figures from the National Center for Health Statistics. "Among low-income children attending publicly supported health programs, principally W.I.C., prevalences of 8 to 10 percent in growth stunting and 11 to 18 percent in iron-deficiency anemia are observed," says Dr. Trowbridge. "This compares with a 3 percent prevalence for both expected in the general population."

Diagnosed cases of anemia and obvious instances of low weight and height for age may well represent "the tip of the iceberg," asserts Dr. Paul Zee of St. Jude's Children's Research Hospital in Memphis, Tenn. Dr. Zee described "the iceberg phenomenon" in a 1979 paper: The "sporadic appearance of severely undernourished infants in a city hospital reveals that there is a considerable number of children that are failing to thrive in the community . . . These children are not undernourished enough to come to medical attention . . . But an occasional child may suddenly become severely malnourished because of a superimposed social factor: for example, unemployment of the father."

Buttressing evidence of this "subtle" malnutrition among the poor are studies made in various localities that demonstrate not only the persistence of hunger but the difficulties poor people have in obtaining adequate food. The average food-stamp family's gross monthly income is $369 (or $4,188 a year), and the average food-stamp benefit is only 65 cents per person per meal. Low-income families seldom have enough money to buy food economically, in large quantities, and often lack a way to get to supermarkets in middle-class neighborhoods where they can avail themselves of sales and discounts. They often end up paying disproportionately high prices at nearby convenience-food stores.

Poor people, already purchasing the cheapest food items — starches, frankfurters, chicken necks and the like — have no place to economize when overall prices of food rise. The swelling costs of other rock-bottom necessities — housing, utilities, public transportation, medical care and clothing — further drain their food budgets. The "heat or eat" phenomenon (robbing one's own pantry to pay the power company) has intensified for the poor, who pay one-quarter to one-third of their income for utilities, while welfare and food-stamp benefits have consistently lagged behind the cost of living.

"This is my emergency food grant," Diane says, pulling a frost-covered package of chicken backs from the freezer compartment of her refrigerator. "Just fat and bones, but the marrow is good for you."

Diane (not her real name) has been on welfare, "this crazy circle," for 10 years, ever since forced by illness to stop working. She is divorced and has three children, aged 20, 13 and 11. She lives in a city-run housing project, a dirty-blond brick monolith in a section of Brooklyn where residents are afraid to walk the streets after dark. It is the 23d of the month. Diane notes the date because her food stamps, which arrived on the 8th, ran out the day before. The refrigerator is nearly empty — some Jell-O, leftover mashed potatoes, plenty of onions (they "make the food go round"), nearly empty jars of grape jelly and spaghetti sauce.

Diane sits in her kitchen, studying the Offtrack Betting forms spread out on a table to play the numbers, her back to the stove, where her oldest daughter fries the chicken that, with noodles, will make up their one meal of the day. The greasy haze from the pan hangs in the air, graying the turquoise walls, the sputtering sound mingling with the blare from a television set. Diane, after consulting her daughter, writes a number from each of the Offtrack Betting forms on a piece of paper and gives it along with a dollar to her 11-year-old son, who takes it to the bet shop.

While waiting for her son to return, Diane shares with a visitor the intricacies of "the welfare diet." She talks about wanting to be free of welfare, working at a legitimate job, but her medical history of kidney problems and phlebitis makes getting even a part-time job difficult. Moreover, if she had a job, Diane would be without Medicaid, an Aid to Families with Dependent Children (A.F.D.C.) benefit that she needs not only for herself, but also "in case the kids get sick."

In addition to playing the numbers, Diane pads her meager budget by occasionally working in the bet shop. Among welfare recipients, off-the-books jobs are a fact of life. "It's the only way they can survive," says Auxiliary Bishop Joseph Sullivan, executive vice president of the Board of Catholic Charities of Brooklyn and Queens.

"We all sneak and work," Diane says. "And we do jobs no one else will do. And I don't drink. I'm no partyer. My money goes into my house — my fridge, basically." Diane can earn $35 a day working at the bet shop, a sum she considers worth the risk of "hassles with the law."

Sometimes Diane and her family have had nothing but farina to eat. Or pancakes. Or the rice she buys in 25-pound bags. "Did you ever eat nothing but rice for a week and a half? . . . And we use a lot of bouillon. Bouillon cubes are about 39 to 89 cents a box, and you put that with a cup of water and that's a meal. If you get needles in the house, you can throw some needles in there. If you don't, you just drink it plain. . . . I add beans, onion and tomato purée — it's cheap, 79 cents for a 28-ounce can — to a package of franks, and add mustard. It's not great, but it's tasty.

"I mean, there's surviving and then there's eating and then there's nourishment. And we very rarely get to the nourishment, you know. That's out of the ordinary. That's set aside for holidays and special occasions like birthdays and something like that."

Diane's son runs in, smiling, waving the 10 dollar bills that she won from her dollar bet. Diane shrugs, lays the money on the table, and then hands him $2 to buy milk. Diane shakes her head, thinking aloud. "When they say starving, we're starving. We're starving mentally. We're starving physically. And it's like Reagan has pulled the cork on this whole big tub of social nothingness. And we're all going to drown. And there's nothing nobody can say to make it easier or anything like that. It's like being raped from within."

Yet Diane's opinion of welfare has something in common with President Reagan's: "Welfare as it stands now," she says, "should be abolished. . . . It's not giving you anything, and it's not teaching you anything. . . . It's like I heard of girls that say they got a pimp. I mean, the pimp takes them and treats them

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like a queen for a little while and then starts stripping them of all their values, their moral character and then just degrades them to the lowest — that's welfare. It makes you feel like, hey, what's the point of getting up in the morning and turning around because it's going to be the same old program."

Diane's views on welfare are far from unusual among others trapped with her in that "crazy circle." "President Reagan makes some good points," says Rita Webb Smith, a one-time welfare recipient who now runs a community "survival clinic," instilling self-help principles in people who have been conditioned to look to the Government for sustenance. "We've always given the poor handouts and not helped them build toward self-sufficiency," says Mrs. Smith. "That's why I never liked the poverty programs. But these budget cuts are too quick, too drastic. It's like the rug being pulled out from under people."

We've done some modeling of the effects of the 1981 budget on poor people," says Donald W. Moran, executive associate director for budget in the Federal Office of Management and Budget. "We try to design these things from the standpoint of policy, rather than from the standpoint of a long list of computer runs. We intend to do a lot more work, not in terms of what is our budget cut — because every budget starts out at zero — but what does the budget provide. It may run less or more than last year, but the comparative dollar magnitudes are not as relevant as what is being provided. The question is, what is that? And is it enough to meet the need? In our judgment, the answer is, yes, it is enough."

Yet some experts disagree, including Robert Greenstein, head of the Center on Budget and Policy Priorities in Washington, a privately funded nonprofit organization that analyzes Federal budget and fiscal policy issues with an emphasis on domestic programs for low-income people. Under the Carter Administration, he served as administrator of the Food and Nutrition Service in the Department of Agriculture. Entitlement and benefit programs account for nearly 50 percent of the Federal budget, but most of that funding goes to programs serving every income group, such as Social Security, Medicare, military and Civil Service pensions. Food stamps, A.F.D.C., Medicaid and other programs targeted at the poor, he says, represent only about 10 percent of the budget. Yet this area has been cut far more than other sections of the Reagan Administration's budget. In the Carter Administration's 1981 budget, Federal appropriations for low-income programs were $140 billion. In 1983, they are expected to be around $82 billion, which, adjusting for inflation, represents a reduction of more than 30 percent over the last two years.

Basing his study on recent figures from the Congressional Budget Office, the Department of Agriculture and the Department of Health and Human Services, Greenstein has estimated the impact of the Reagan Administration's budget cuts and rewritten regulations: Nearly one million people no longer receive food stamps. In addition, close to 20 million receive less in food-stamp benefits than under prior law, and about 80 percent of these savings was made by decreasing benefits to families whose gross income fell below the poverty line — $7,700 a year for an average household of three. A.F.D.C., the basic welfare grant, is now smaller for some 360,000 families. Around 265,000 additional families have already lost this assistance — and, in some states, the accompanying Medicaid benefits as well. Approximately 750,000 low-income children are no longer eligible for free school lunches, and 300,000 children have been dropped from the summer food-service program. Because of the 20 percent cut in the child-care food program and other reductions in Federal support for low-income child care, some day-care institutions are reducing services, raising fees or closing. The already modest energy-assistance program has been held for 1983 to levels only 7 percent above the amount provided in 1981, despite significant increases in natural-gas prices and heating costs. Programs such as Medicaid and housing for the poor have also been pared.

Clearly, cuts in food and nutrition programs affect the poor and elderly. Less obvious but equally devastating is the new financial burden imposed by other austerity measures, which further erodes the ability of poor families and individuals to feed themselves adequately.

Although the statistical picture alone is dramatic, some experts question whether numbers should be the sole criterion in assessing hunger. Dr. Johanna T. Dwyer, director of the Frances Stern Nutrition Center at Tufts New England Medical Center, says, "If a person ate dog or cat food for a month, he would not necessarily suffer from clinical malnutrition. But even though there might not be anything wrong with that person from a clinical standpoint, there is something wrong ethically and morally with a country of our capabilities that doesn't do something to prevent its poor citizens from having to resort to things like that. There are dimensions to the hunger problem that one cannot measure on biochemical indices or in nutritional status surveys. I don't think people should have to worry about getting enough to eat in the United States of America."

President Reagan has suggested that volunteerism and private charity can help mend the widening holes in the Federal "safety net." The reaction of religious organizations, long the backbone of nongovernmental charity, indicates that the suggestion may be impractical. "There is absolutely no way the churches can compensate for loss of Government aid," says Auxiliary Bishop Joseph Sullivan of New York City. "It's just beyond human capacity. About one-third of our parishes are in poverty areas to begin with. They can't keep up their buildings as it is. And it's these areas where the demands are the greatest."

The Rev. Neill Richards of the United Council of Churches agrees, saying, "It's even questionable if we can continue the amount of support we've been giving, in light of the increased demand."

At the same time, the specter and, in some cases, the reality of Federal cutbacks have given an impetus to organizations and individuals to try to be more self-reliant. "Other liberal groups accuse us of being soft on Reagan," says Barbara Bode, president of the Children's Foundation in Washington. "But we're merely being realistic." The Children's Foundation, a nonprofit national advocacy center for child nutrition and home-based child-care programs, once was funded by the now-defunct Federal Community Services Administration. "Now we're funded through foundations, churches and private donations," says Miss Bode, "but in two to three years, we plan to be self-sufficient, not dependent on grants. We're starting a number of income-producing projects — for instance, selling medical and life insurance to day-care associations, publishing a cookbook for family day-care providers. And we're trying to show providers around the country how they can get along without subsidies should Federal support of family day care be cut, how to act as businesses, taking tax deductions . . ."

Some groups will survive no matter what, and so will many individuals. Yet many people cannot fend for themselves because they are too old or too young, mentally or physically disabled, or demoralized or otherwise crippled by poverty. The poverty programs may be inadequate, flawed, problematical, as many critics have charged, but, for the moment, they are all the poor have.

To chip away at these programs would not substantially reduce the Federal deficit, estimated at between $150 billion and $200 billion for fiscal 1983. "Since these programs have been severely cut already," says Robert Greenstein of the Center on Budget and Policy Priorities, "since the poor have done far more than their share to balance the budget, equity dictates that further deficit reductions be directed elsewhere — at the military and the high-income people who can most afford to make some sacrifices, but who have been actually given windfalls. Further cuts in poverty programs really would do incalculable harm."

Indeed, the economic recovery President Reagan promises may come too late, if it comes at all, for people such as Frank and his wife or Diane and her children.

"After all is said and done," an official from the Department of Agriculture commented, "there will always be malnourished people in this country because of sociological factors, psychological factors. And you can't look to the Federal Government to solve all these problems. I would say maybe that argues for going back and redesigning a lot of our programs to be very specifically targeted. . . . But the real solution to poverty-related malnutrition is removing the poverty."

In 1977, the Field Foundation medical investigators qualified their accolades for food programs with the observation that jobs (along with good health care and housing) should be the Government's top priority in aiding the poor. Concurring, Dr. George G. Graham, professor of human nutrition and pediatrics at Johns Hopkins University, says, "For 13 years, we haven't been addressing the basic problems — quality of public schools, housing, job training, job opportunities."

"Let me put it to you this way," says Donald Moran of the Office of Management and Budget. "If the whole economy does not get better, then no amount of social-welfare spending is going to fix the problem." ■

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Poverty Groups Parallel High Risk Populations

FN 2.21

Population groups known to be at high nutritional risk include children and adolescents, women of childbearing ages and the elderly, regardless of socioeconomic strata.

"The relatively high vulnerability of children and pregnant and lactating women results from increased requirement for calories and essential nutrients . . . . In children, this is because they are growing; in pregnant and lactating women, because they have to feed an additional being . . .

"Nutrient requirements of the elderly, on the other hand, usually are decreased due to lower basal metabolism and decreased physical activity. Their greater vulnerability may result from such factors as the effects of increased physical disabilities and health problems (with regard to) their ability to utilize nutrients. It is also conditioned to a larger extent . . . by socioeconomic and psychological factors, including food shopping problems and degree of interest in food preparation."

When poverty is superimposed upon these preexisting risk situations, the risk becomes even greater. Unfortunately, this is precisely the case among substantial segments of the population.

For example, children and the elderly combined account for nearly half of the poverty population (17% of all children and 14% of all elderly citizens are in the poverty brackets).

Women are also predominant in the poverty ranks: 33% of all female household heads, as compared to 7% of male household heads, are in poverty income brackets. Similarly, a higher percentage of single females than single males are found in the poverty groups.

Some nutritional problems appear to be related to race, or more accurately to the eating habits characteristic of particular ethnic subgroups. Iron deficiency anemia and to a lesser extent folic acid deficiency were widespread problems among the low income populations surveyed in the Ten State survey. Riboflavin status was particularly poor among blacks; low vitamin A levels were prevalent among Spanish-Americans.

Paralleling these risk groups, poverty in the United States is frequently related to race as well. Nearly a third of all blacks and more than a fifth of Spanish-Americans live in poverty, as compared to about 9% of whites. While the national median income among whites is $16,740, among blacks it is only $10,142. According to 1980 figures, nearly half of all blacks earn less than $10,000, compared to about one-fourth of all whites.

Geographically, the number of impoverished people in rural areas appears to have increased in recent decades. The ratio of urban poor to rural poor is about 60:40, as compared to an overall 73:27 geographic distribution (urban to rural) of the total population. So although in overall numbers there are still more needy people in the cities, as a percent of total populations there are more needy to total people in rural areas.

USDA Nationwide Food Consumption Survey, 1977-78: "For all nutrients except iron and thiamin, the percentage of households that met or exceeded the RDA increased as income increased . . . These lower levels for low-income households conflict with the results reported above . . . [namely] that low-income households fared as well as those with higher incomes."

The following data from the 1977-78 USDA survey illustrate the same trend. Except in the case of iron, the number of diets that fall short of selected problem nutrients decreases as income increases.

PERCENTAGE DISTRIBUTION OF INDIVIDUALS IN SPECIFIED INCOME GROUPS, with nutrient intakes at 70% or less of 1980 RDAs

Nutrient	Income to $6M	$6M to $9,999	$10M to $15,999	$16M and over
Vitamin A value	36%	33%	32%	29%
Vitamin B_6	59%	51%	49%	48%
Vitamin C	30%	29%	27%	23%
Calcium	49%	43%	39%	39%
Iron	29%	31%	33%	33%
Magnesium	48%	40%	36%	35%

These figures are particularly dramatic insofar as they represent people whose nutrient intakes are not only short of the RDA, but are *severely* short – 70% or less of recommended levels. In the lowest income group, almost three-fifths of all individuals surveyed were severely short in vitamin B_6 intake . . . nearly half were severely short in calcium and magnesium . . . around one third were severely short in vitamin A, vitamin C and iron. Nutrient intakes do improve as income increases, but even in the higher income groups, they still fall far short of an optimal picture.

Source: Vitamin Nutrition Information Service.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do As a World Citizen Regarding Food?
CONCERN/CONCEPT	Political and Economic Policies/ Food Industry-Careers

HOMEMAKING SKILLS

- Obtain information about the food industry and careers

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Display a food item. In groups, brainstorm all jobs that would be involved in producing and selling that item. Compare lists.
	Preparation	Explore vocational, technical, or college programs in the foods industry. Visit a vocational school program.
		Collect articles on jobs in the food industry, including statistics on numbers of people eating food away from home. Discuss implications for career opportunities.
	Food industry jobs	Develop a list of job clusters for the food industry.
	Career opportunities	Invite restaurant owner to explain career opportunities and career ladders in food service and what they look for in employees.
	Entrepreneurship	IEE -- Research possibilities for starting your own business in food service.
		FHA/HERO -- Invite a panel of caterers, cake decorators, diet consultants, small food business owner to discuss business enterprises. For each entrepreneur or small business owner, develop a list of advantages and disadvantages for entrepreneurship. Also develop a list of skills for each occupation.
		FHA/HERO -- Develop a business project for fund raising. Use concepts such as specialization, time and resource management, costs and prices, market analysis and inventory.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		IEE -- Select a career in food service and shadow a worker in that field.
	Teen employment	Invite a guidance counselor to discuss laws and regulations affecting youth employment (work permits, age and hours, minimum wage, workmen's compensation, health certificate).
		Collect news clippings of jobs available in food service. Share in class.
	Reflection	Write a paragraph describing how you feel about working in the food industry and if you were to choose a career what it would be. Include how your personal characteristics affect your decision.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs?
CONCERN/CONCEPT	Food and Social Interaction/ Social--Emotional Meanings

HOMEMAKING SKILLS

- Relate eating patterns to social/ emotional meanings

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors which influence our food choices	List all the foods that you ate yesterday. Beside each, indicate the time you ate the food, and the situation surrounding you (with friends, family, watching TV, studying). Put a check beside those times you ate when you were hungry. Beside those items not checked, identify a reason for your eating the food (boredom, to eat with friends, celebrate, to make you feel better). How many of you only eat when you are hungry? Are there other things which influence your eating patterns beside hunger? In small groups, list examples of foods you would choose to eat because of your feelings. Identify foods you would eat if you felt mad, nervous, frustrated, afraid, happy, fat, secure, sick, or lonely. (Happy--favorite food for birthday dinner; fear--sucker at doctor's office.) What would happen if your eating habits were constantly influenced by one or more of these emotions? What would this mean for you? Your family? Your society? Do *Personal Shield of Foods. Complete the following statements by filling in the blanks with words or phrases that describe your food choices. --My best memories are about eating_____. --My worst memories are about eating_____. --When I want pep and energy, I eat_____. --When I want to eat something good for me, I eat_____.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Psychological and social influences of food	--I never eat _____ because it is not safe. --I feel good when I eat _____. --When I'm all alone, I eat _____. --I eat _____ to impress others. --When I'm with friends, I eat _____. --After some time, I learned to like eating _____. --I think of this food as expensive _____. --I think of this as a food you eat if you are poor _____. Share your answers with the class. What factors seem to influence your food choices? Using resources, gather information concerning factors which influence food choices. Focus specifically on psychological and social influences (peer pressure, emotional props or outlets, sensory pleasure to influence others, reward, punishment, social acceptance). List foods that have strong associations or memories for you. (Popcorn, watermelon, hot dogs, cheeseburgers, jelly beans.) Read your list to five other people. Write the things that first come to your mind when you hear each food named. Compare and contrast responses. Are there similarities and differences? Give possible explanations for the similarities and differences? Plan your favorite dinner menu. In groups of three, share your menus and brainstorm a list of reasons why each of you chose the foods in your menu. Identify the types of values which underlie those reasons. Which type(s) of values seems to occur most frequently? Why? Invite a guest speaker to discuss eating disorders or conditions such as anorexia nervosa, obesity and nutrient deficiencies. Summarize the information given by the speaker by listing factors which influence eating disorders or conditions, alternatives individuals have regarding food choices, and consequences of each alternative. Which alternative would be best? Why?

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Reflection	Find magazine pictures of food that best illustrate the factors which influence food choices. Arrange food under the factor to which it corresponds on a bulletin board entitled, "Why Do We Eat What We Eat?" IEE--For one week, keep a record of your food choices, time of day eaten, emotional feelings at the time, social setting, and other influences on your food choices. Identify patterns of behavior. Are you satisfied with these patterns? Why or why not? Using the practical reasoning process, resolve the question: What should I do regarding the social and psychological influences on my food choices? FHA/HERO--Write an article for the school newspaper relating to the psychological and social needs affecting our food habits. Read article to the class. Vote on which article should be submitted to the school newspaper for publication.

111.

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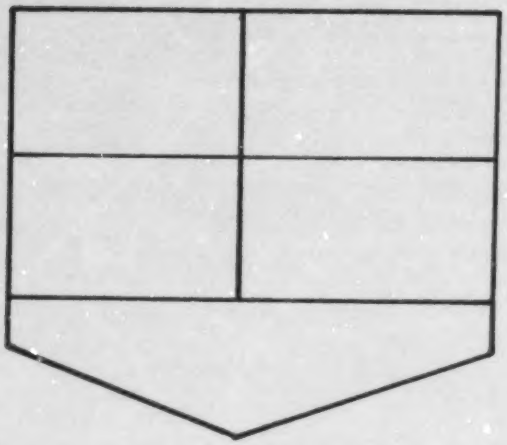
PERSONAL SHIELD OF FOODS



Where would you go or what would you eat if you were in a hurry?

Where would you go or what would you eat with someone special? (or a romantic evening)?

What is your soul food?
- --a food from your childhood
- --a food that you may not have shared with guests
- --a food that conjures feelings of warmth, love or security
- --a food that may remind you of a time of year or special occasion
- --a food which you like so much you can hardly stop eating

What is your once-in-a-blue-moon food? seasonal, expensive, high calorie?

What is your signature food (a food you like to cook or a food that people would cook for you or give to you)?

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs?
CONCERN/CONCEPT	Food and Social Interaction/ Food Presentation

HOMEMAKING SKILLS

- Present food aesthetically
- Entertain guests in the home

PROCESS SKILLS	CONCEPTS	STRATEGIES
		In groups of three, select one of the menu descriptions listed below and create a poster depicting that menu. Use pictures of food and table service or drawings to illustrate the menu. --All foods in the menu are round in shape. --All foods are soft in texture. --All foods are cold. --All foods are sweet. --All foods are white in color. Share your posters in class. Do these posters look appetizing? Why or why not? What other senses, besides sight, do we use in deciding whether a meal is appetizing? How would you feel if any of these meals were served to you in a restaurant? Is the presentation of food important? Why or why not?
	Factors affecting the presentation of food	Using resources, identify factors which influence food choices regarding how food is presented when it is served. Why are each of these important? (Appearance, flavor, texture, temperature, shape, table service.) In groups of three, create a daily menu plan (breakfast, lunch, dinner, snack) which you feel would be appealing. Consider color, texture, temperature, shape and flavor of the foods you use. Share your menus with the class, giving reasons for your food choices.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors affecting the presentation of food (continued)	Plan and prepare a foods laboratory for the following activities. --Cook vegetables for different amounts of time. Judge their color appeal. --Taste different foods blindfolded. Judge lack of eye appeal. Taste with clothespin on your nose. Judge for taste appeal. --Make cornstarch pudding. Use green, blue, red and yellow food coloring. Taste each color of pudding and decide which tastes best. Which colors are appealing and which are not appealing? --Fill small cheesecloth bags with substances that have distinct odors. Identify the contents of each bag by smelling. From the smell of this food, name three specific uses for it. For example, vanilla beans may be used for ice cream, pies and candies. Share your findings from the food laboratory with the class. How do these findings support what you have learned about the presentation of food thus far? Given cards depicting alternative ways to serve food at home (formal, candlelight, with music; from the kitchen pot -- no table setting; place mats, casual china), discuss: --When would you use that mode of service? --What would be the situational factors, goals and values that would lead you to choose that mode? Using resources, define the term garnish and identify several types of garnishes. Why are garnishes used? Are they important to food presentation? Why or why not? Watch a teacher demonstration of simple and elaborate garnishes. Practice what you have seen by preparing foods from each of the four food groups and garnishing them to increase the appetite appeal of each food.
	Table appointments	Using resources, identify types of table appointments (expensive vs. inexpensive, formal vs. informal) and how they can be arranged to enhance how foods are presented. Watch a teacher demonstration on correct table settings and practice setting a table correctly using table appointments.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Table appointments (continued)	In groups of four, use table appointments to make two place settings--one appealing and one that is not appealing. Invite other class members to see your table settings. Identify reasons why the settings are appealing or not appealing.
	Using centerpieces	Invite a guest speaker to discuss the use of centerpieces and to demonstrate how to make several styles of centerpieces. Develop questions to ask speaker, such as: --Why are centerpieces used? --What factors should be considered in selecting a centerpiece? --What materials work best for making centerpieces?
	Reflection	In groups of four, plan a menu and select table appointments for the table setting. Invite several guests to eat the meal with you. After they have eaten, ask them to rate the meal on the following points: eye appeal, flavor, texture, temperature, and table setting. Discuss the ratings and comments you received. Was your meal presented well? Are there any improvements you could make? Write a paragraph summarizing your findings. Using the posters you made at the beginning of the unit, make a second poster which illustrates how the menu could be improved. Display your "before" and "after" posters on a bulletin board. FHA/HERO--Plan and prepare refreshments for a local meeting using the principles of food presentation. FHA/HERO--Invite a chef from a local restaurant to discuss ways he/she uses to add appetite appeal to food served in the restaurant. Write an article summarizing the chef's visit to the class and submit it to the school newspaper.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs?
CONCERN/CONCEPT	Food and Social Interaction/ Etiquette

HOMEMAKING SKILLS

- Use socially acceptable etiquette
- Entertain guests in the home
- Plan recreational and social activities

PROCESS SKILLS	CONCEPTS	STRATEGIES
		In groups of two, read each of the following vignettes and explain how you would react to the situation. How would you feel? --Your friend Alice reaches across the table for another sweet roll, practically elbowing you in the process. --Bill talks constantly throughout dinner, even with his mouth full of food. --In a restaurant, Ann starts combing her hair at the table. --Terry props his feet up on the empty chair across from him at the table. --Jan uses her fork by clutching it with her fist. --Bob tucks his napkin into the collar of his shirt before eating. --After sitting down at the table, Jane parks her chewing gum on the empty bread and butter plate. --While telling a story at the table, Joe waves his fork around to make a point. Are manners important? Why or why not? Which is more important--What you prefer to do or how what you choose to do affects others? Why should you be concerned about your etiquette for yourself? Your families? Your society? List reasons why there are rules of etiquette for situations involving food. Identify types of values underlying these reasons. Identify your most embarrassing moment in a situation involving food or eating. Why was it embarrassing for you? Was there a way the situation could have been avoided? Share your moments and your thoughts with the class.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors which influence the use of etiquette rules	Using resources, identify factors which influence the proper use of etiquette rules. (Atmosphere, type of service, types of food, where the meal is served, what experts say, what is accepted in your local area, personal values.) Using resources, compile a list of etiquette rules to use for various situations. (Informal entertainment, formal entertainment, eating at home, eating out.) Share with class and compile a check sheet, "Me and My Manners." Using the vignettes above, role play the situation as it is written. Then role play it a second time using the correct etiquette. As a class, generate positive and negative consequences of using proper etiquette and not using proper etiquette. In groups of three, read the following vignettes and determine what you would do in each of these situations. --In a restaurant, you suddenly notice a bug in your soup. --At a banquet, you suddenly realize you are using a fork when everyone else is using a spoon. --You feel the urge to sneeze in the middle of a meal. --You drop your fork on the floor when eating at a restaurant. --By accident, you knock over your glass of water, soaking the tablecloth and drenching the food on your plate. Compare your "solutions" to those of the rest of the class. Then compare your solutions with those suggestions made by an authority on etiquette such as Amy Vanderbilt or Emily Post. Plan to eat at a local restaurant with a formal dining setting. Practice appropriate etiquette in ordering, eating and tipping. On your return, write a paragraph summarizing your experience, highlighting the rules of etiquette which you used well and those which you could improve.
	Reflection	Plan and serve a meal or refreshments at a party. Invite guests to attend. Practice appropriate etiquette as a host or hostess. Using the rules of etiquette you have learned thus far, rate yourself as to your strengths and weaknesses. Set goals for improvement and keep a journal showing your progress.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs?
CONCERN/CONCEPT	Food and Social Interaction/ Influence of Media

HOMEMAKING SKILLS

- Analyze influence of media on food choices
- Evaluate food advertisements

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Read the following vignettes. --A five-year-old boy talks his mother into buying a box of cereal because he has seen it advertised on TV and knows he will get a prize in the box. --A man buys Imperial margarine instead of a generic brand because he cut a coupon from the newspaper for Imperial. --A teenager is dieting so that she can look like Crystal Carrington, her favorite TV character. --A woman picks up a candy bar in the checkout line and hums, "Get two great tastes in one candy bar!" --A man reads a newspaper article discussing the effects of heavy coffee drinking and decides to stop drinking coffee. What affects the food choices of the people in these situations? Do you think these situations are realistic? Why should we be concerned about the influence of the media on food choices for ourselves? Our families? Our society? Using resources, identify the various aspects of the media which influence food choices (TV shows, advertisements on TV, radio, newspapers, magazine and newspaper articles). In groups of three, examine food advertisements. List slogans used in the advertisements. Beside each slogan, identify what the slogan tells you about the product and how you think the slogan could influence food choices. Share your findings with the

PROCESS SKILLS	CONCEPTS	STRATEGIES
		class. Do you think many people are influenced by advertisements such as these? Why or why not? Do you think this is a problem? Why or why not?
	Effect of advertising on food choices	Using resources, research the effect of advertising on food choices. Include desirable influences (growth of economy, introduction of new products) and undesirable influences (children eating cereals with high sugar content, increase in family food expenses). Design a bulletin board illustrating your findings entitled, "Advertising: Good or Bad?" Discuss consequences of believing all advertising, evaluating each ad for what it is worth, and eliminating advertising altogether.
		In groups of four, create two advertisements for the same food--one with a desirable influence on the consumer and one with an undesirable influence on the consumer. Share these with the class.
		Using resources, identify ways to evaluate advertising. What should consumers consider when judging the worth of an advertisement? Using the ads you have created in the previous learning experience, judge each advertisement using the identified ways to evaluate.
	Selling techniques used by food manufacturers in advertising	Using *Advertising Techniques, identify types of selling techniques used in food advertising (snob appeal, bandwagon, plain folks, nutrition pitch, coupons). Illustrate each technique by finding an advertisement from a newspaper or magazine which depicts a selling technique.
	Selling techniques used by the retail food store	Using resources, identify types of selling techniques used in retail grocery stores (bargains at end of aisle, impulse items near checkout lanes, sales, coupons, placing products at eye level of the customer, displays, free offers). Perform skits which illustrate customers being influenced and not being influenced by these techniques.
	Influence of TV on food choices	Watch television for an evening during prime time. Record the number and type of food advertisements shown and the theme of the advertisements. Record the situations during the shows in which characters refer to food or are eating food. Would people be influenced by what you have watched? Identify types of values which are being expressed on TV advertisements and shows. Summarize your findings in a brief report to the class.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Influence of print media on food choices	Examine the food section of a local newspaper. Would the information and advertisements possibly influence food choices? Identify types of values expressed in this section of the paper. Summarize your findings in a brief report to the class. Read *Guidelines for Evaluating Advertising and do *30-Second Radio Commercial.
PR	Reflection	Using the practical reasoning process, resolve the question: "What should we do regarding sugar cereal advertising on Saturday morning cartoons?" Work as a class and arrive at the best alternative for you, your family, and for society. Write a letter to a food company giving your views on a brand product advertisement. IEE--Plan and conduct an advertising campaign for an imaginary food product. Consider how consumers will be influenced by your campaign. Identify values held by consumers as well as values held by the manufacturer. Do these values conflict? Why or why not? FHA/HERO--Design a consumer pamphlet entitled, "How Advertising and the Media Affect Your Food Choices." Distribute the pamphlet in your community.

FN 3.14

ADVERTISING TECHNIQUES

1. Endorsement by a famous person. A famous person tells about a product or using a product. Others believe that if such an important, famous person uses such a product or service that it must be good and they too want and should use it.

2. Testimony is when someone tells how they used and liked a product or service.

3. Personification is when a product is brought to life.

4. Jingle, tune, or rhyme is catchy and easily remembered. Since it is easily remembered you find yourself repeating it which may cause you to want to buy the product or service.

5. Repetition uses words or sounds over and over. Repetition causes the words or sounds to stick with you and may cause you to want or buy a product or service.

6. The Demonstration technique is when the product or service is being employed. This technique makes you want to do what the demonstrator is doing so that you ultimately buy the product.

7. Nutrition Information makes the product seem nutritionally superior to other products. Make sure that the information given actually is nutrition information (e.g., labeling information) and not so-called nutrition information (e.g., Brand X cereal is so nutritious).

8. Free Gifts that are offered when a product is purchased.

9. Using Happy or Pleasure Words which cause consumers to associate happiness with the product or service.

10. Audience Participation techniques invite consumers to become involved in some way (e.g., enter a contest, clip a coupon, etc.)

FN 3.14

GUIDELINES FOR EVALUATING ADVERTISING

1. The ad uses a method of attraction that serves a purpose, such as:

   _____ recipes
   _____ directions for use
   _____ nutrition information
   _____ other

2. The ad gives:

   _____ valuable information
   _____ useless information
   _____ exaggeration

3. The ad gives:

   _____ factual information
   _____ non-factual information
   _____ misleading information
   _____ no information at all

4. The persuasive elements are:

   _____ mild
   _____ average
   _____ strong

5. The ad stresses characteristics of the product that are:

   _____ major
   _____ minor

6. The ad does not:

   _____ make false claims
   _____ arouse unpleasant feelings
   _____ overplay a fear

7. The ad does have these positive features:

   _____ points out the special qualities of a product
   _____ emphasizes changes made in a product
   _____ points out a unique packaging advantage or design
   _____ strives to create a friendly feeling toward the industry
   _____ provides information on which you can base a decision

8. The ad also describes the product as to:

   _____ content
   _____ other uses
   _____ cost
   _____ varieties available
   _____ other

Source: Dairy Council of Mid-Ohio.

FN 3.14

30-SECOND RADIO COMMERCIAL

Evaluate the two following radio commercials for yogurt. Indicate on the line provided for each whether you feel the ad is factual or misleading. Underline all factual statements in each ad.

Circle all misleading statements in each ad.

Ad #1 _____ factual _____ misleading

Did you know that yogurt is really a bonafide health food? It's true. Besides tasting so good and having so many important vitamins and minerals, yogurt has some unique health benefits--it really is the "food of long life." People who include yogurt as part of their regular diet live longer and retain the qualities of youth. Yogurt is a cultured dairy product and is easy to digest. Remember to include plenty of yogurt on your shopping list. It's the most important dairy food!

Ad #2 _____ factual _____ misleading

What's the dairy food that's taking the country by storm? You guessed it, it's yogurt. Creamy, custard-like yogurt has many things going for it. It's convenient. Eat yogurt right from the carton as a quickie dessert or between-meal snack. It's versatile. It comes in a variety of flavors and mixes well with many different foods. Most of all, yogurt is very nutritious, containing many of the vitamins, minerals and other nutrients found in milk. Next time you go shopping, reach for a carton of yogurt. There's a lot of food value in that little 8-ounce carton!

KEY - Ad #1 - misleading
Ad #2 - factual

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Source: Dairy Council of Mid-Ohio.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs?
CONCERN/CONCEPT	Cultural Value of Food/ Family Traditions

HOMEMAKING SKILLS

- Provide for family customs and traditions

PROCESS SKILLS	CONCEPTS	STRATEGIES
PROBLEM		Read each of the following examples. Identify the problems which can result. Brainstorm ways of resolving differences, while continuing to respect cultural values and family traditions, and rank according to stress. --Ellen, who comes from a family with a tradition of eating the evening meal together, marries Bill, who comes from a family who rarely had time to eat together. --Roberta always turns down invitations to go to Alice's house for dinner because Alice's family always eats health foods that Roberta hates to eat. --Jane likes Jack a lot, but is embarrassed to go out with him because of his bad table manners. --Brad's new roommate eats the evening meal late in the evening, while Brad is hungry around five o'clock. --Susan and Tom are planning their wedding reception. It is traditional in Tom's family to have a large meal as part of the celebration, while Susan's family feels that hors d'oeuvres would be more appropriate. In groups of three, share your rankings. List reasons why you have ranked the situations as you have. Identify types of values which underlie your reasons. Are conflicting family traditions in food choices a problem? Why or why not? Prepare a bulletin board using family pictures taken at holiday gatherings. Share a brief report as to how your family celebrates the holiday, the special food your

PROCESS SKILLS	CONCEPTS	STRATEGIES
		family serves at the occasion, and why that food is served. What problems, if any, would be created if you served different foods? How did your family acquire these family traditions?
	Factors which affect food choices resulting from family traditions	What value are family traditions? Family traditions give meaning and support to family. Do you think this is so? Do you have any evidence of this? If this is true, what are some traditions in your family? What might you start? Using resources, investigate factors which affect our food choices within a family. (Religion, family resources, lifestyle, cultural background, family activities.) In groups of four, write a typical dinner menu served in your home. Compare your menu with others served in the class. What are the similarities? Differences? Count the number of times the same food appears on your menus and name the most popular food. Why do you think it is the most popular?
	Regional influences on family tradition	In groups of four, research food choices in one area of the United States (southern, eastern, southwest, northwest). Share your findings with the class. Referring back to the former learning activity, would the most popular family food choice be the same if you lived in another region of the United States? Is there a typical American meal? Why or why not? Prepare a smorgasbord of favorite family foods. In small groups, share the recipe of the food you selected and reasons why this food is a family favorite. Generate reasons as to why this food has become a tradition or a favorite in your family.

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PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Effect of changing lifestyle on family traditions	Read the following case study and use the practical reasoning process to resolve the question: What should Karen do regarding eating patterns for her family? Karen and her husband, Brent, live in a big city and are highly involved in careers. Though they were both raised in a small town, they enjoy their lifestyle, in spite of commuting a long distance to work each day. Their two children, Lisa and David, are teenagers and have become more and more involved with extracurricular activities such as school clubs, music lessons and art classes. Lately, Karen has been noticing how little time the family spends together. Karen and Brent came from families who always sat down to eat the evening meal together, but when they get home late from work, Lisa and David have usually left for the evening. Karen is frustrated because she feels her family is missing out by not eating dinner together. What should she do? IEE--Plan the family meals for one week. Incorporate new and different foods in the menus. Prepare and serve the food differently. Keep a diary on each day's menu and reaction from family members. FHA/HERO--Prepare family cookbook, using recipes which have been passed down for several generations. Beside each recipe, include where it came from and any family history you can discover and report. Visit a local museum. Observe the materials related to food storage and preparation. Discuss ways that family traditions influenced the development and use of these materials. On your return, create a story about a family who would most likely have used the materials you saw.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Psychological and Social Needs
CONCERN/CONCEPT	Cultural Value of Food/ Cultural Traditions

HOMEMAKING SKILLS

- Recognize cultural food traditions

PROCESS SKILLS	CONCEPTS	STRATEGIES
		In six groups, prepare a recipe of a food from a particular culture. Do not reveal to the class the cultural origin of particular recipe. Arrange foods in a smorgasbord and as each of you taste each of the foods: --describe its taste --try to identify what is in the recipe --how does it contribute nutritionally to daily food requirements --guess what country it is from --decide if you would like to eat the food again Share your findings with the class and identify the country each food is from and how it is made. Do you think most Americans would like these foods? Why or why not? Do cultural influences affect our food choices? How?
	Ethnic foods	Using resources, define the term ethnic foods. Generate examples of ethnic foods which you or your family enjoy eating. What effect have ethnic foods and cultural and religious customs had on the foods served in your family and your own food likes and dislikes?
	Factors which influence food choices	Using resources, investigate factors which influence food choices within a specific culture (geographic location, superstitions, religious beliefs, social activities, economics, availability of foods, technological advances, etc.).

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors which influence food choices (continued)	Visit a local ethnic restaurant to sample an ethnic meal. Interview the chef or owner. Ask how recipes used may have been modified from the original recipes and reasons why. Request recipes to share with class.
	Cultural traditions	Research food traditions within a particular culture. Use library resources and interviews with people of the culture or local organizations which support the culture. Share your findings in a report to the class.
		Invite a foreign exchange student to your class to discuss problems with food customs in the student's new home. Were these problems resolved? If so, how? Summarize the presentation by listing the alternatives the speaker had and the consequences faced by each alternative. Do you believe he or she selected the best alternative? Why or why not?
		Brainstorm the problems related to food that you would find in the exchange student's native country. How do you think you would resolve those problems? Does looking at "both sides" influence your feeling of acceptance for cultural differences?
		In groups of four, draw a lifeline and indicate points along the lifeline at which one might be confronted with cultural food choices different from his/her own (college, marriage, military service, job in another community, foreign exchange student). Select one of these situations and develop a case study about it. Use the practical reasoning process to help the character reason through the question--"What should I do regarding conflicting cultural food choices?" Share your reasoning process with the class.
		Design a bulletin board depicting different cultures and their representative foods.
		FHA/HERO--Hold an evening festival celebrating the food customs of a particular culture. Serve a meal representative of the food choices of the culture. Set up displays illustrating factors which affect cultural food customs.

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PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Procurement/Producing--Growing

HOMEMAKING SKILLS

- Develop home gardening skills

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Interview at least five students in your school concerning home vegetable gardening using the following questions. --Does your family have a home garden? Why or why not? --If so, is it a small garden (enough for your family to enjoy fresh vegetables) or a large garden (so much that your family must preserve or give away part of the produce)? --What factors influenced your family's decision to have or not to have a garden? --Who is responsible for caring for the garden? --What are the advantages of having a home garden? The disadvantages? Using your findings, write five statements which describe what you have learned about home gardening in your area. Share your findings with the class. Compare the percentage of students you polled with home gardens to a recent national average of 41% of households with vegetable gardens. Do you think home gardening is popular now? Why or why not? List reasons behind your opinion and the values which underlie those reasons.
	Factors affecting the decision to have a home garden	Read the following vignettes and identify values which might influence a family's decision to have a home garden. --For generations, Lisa's family has grown its own vegetables. --Bill has little time to cook and prefers convenience foods since they are much faster to prepare.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors affecting the decision to have a home garden (continued)	--John gets satisfaction from watching vegetables grow which he has planted. --Amy does not enjoy working in dirt. --James believes fresh produce is much tastier than any canned or frozen varieties. In groups of three, brainstorm a list of situational factors which would influence the decision to have a home garden (time, energy, equipment, space available, family needs, money). Share your list with the class and compile a final list on the chalkboard. Compare your list with resources to see if more need to be added.
	Advantages and disadvantages of home gardening	Invite a panel of home gardeners into class to discuss advantages and disadvantages of home gardening. Using what you have learned, design a bulletin board entitled "To Grow or Not to Grow?" depicting pros and cons of home gardening.
	Reasons for beginning a home garden	Examine the following recent statistics. <u>What Motivated First-Time Gardeners?</u> Fun and joy of it ..... 26% Helps budget/saves money..... 30% Better tasting/more healthful food..... 7% First time land available..... 9% More time this year..... 7% For relaxation..... 1% Other/don't know..... 20% Compare these results with what you learned on your survey and what you learned from the panel of home gardeners. What are the differences? Similarities? Invite a speaker from the cooperative extension service to present a program on beginning a home garden. Summarize the presentation using posters representing the following: --Initial considerations (size, location, type of plants). --Equipment needed. --Initial costs. --Gardening problems (bugs, weather, pests, weeds).

PROCESS SKILLS	CONCEPTS	STRATEGIES
 133. PR	Sources of gardening information	In three groups, select one of the following general sources of gardening information and identify specific resources which are available from magazines and newspapers (titles of magazines, weekly columns, pamphlets), TV and radio (regular TV or radio series), and community sources (agencies, clubs, courses available). Share your information with the class. Investigate the cost of renting a garden plot in your community. Under what circumstances might this be a gardening alternative? What factors would you consider before renting a garden plot? What are the consequences of this alternative? Purchase seeds or small garden plants and grow several varieties of vegetables in the classroom using the gardening information you have learned thus far. After you have harvested the vegetables, prepare them as part of a foods laboratory. IEE--Keep a journal documenting your family's decision to plant a home garden or use other methods of food procurement (using the practical reasoning process). Use charts and pictures to further explain your written observations. FHA/HERO--Plant herbs and vegetables in pots. Take home for use in cooking or sell for money-making project.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Procurement/Producing--Preserving

HOMEMAKING SKILLS

- Prepare food to control bacterial growth
- Develop food preservation techniques

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR		Distribute one apple to each student in your class and imagine that each apple is actually a bushel of apples. In groups of four, brainstorm alternative ways of dealing with a large quantity of food at one time (giving it away, preserving it, or letting it rot). Share your list of alternatives with the class and make a complete listing on the chalkboard. Why should we be concerned about food preservation for our families? Our society?
	Types of food preservation	In three groups, select one of the food preservation techniques: freezing, canning, drying. Using resources, find ten facts concerning each method and design a poster depicting the steps to follow in the use of that preservation method. Include storage containers, equipment, time, cost and skills required. Share your facts and poster with the rest of the class. See *Dry Your Own Food to Save Resources.
		Examine the following statistics from a recent survey. In groups of four, generate reasons and values underlying those reasons for each of the statistics. Share your conclusions with the class. --Although home food preservation is popular among gardeners of all experience levels, the longer a family has been gardening, the more likely they are to preserve. --55% of all home gardeners who preserved food chose freezing as a preservation method. --Of the 31 million households with vegetable gardens in 1978, 76% preserved vegetables.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Types of food preservation (continued)	--8% of all home gardeners who preserved food used drying as a preservation method. --49% of all home gardeners who preserved food chose canning as a preservation method.
	Control of micro-organisms during food preservation	Invite a speaker from the cooperative extension service to discuss proper sanitation and control of microorganisms in food preservation. Summarize the presentation by making a chart showing specific steps taken to control microorganisms in food preservation and consequences which would occur if these steps were not followed.
	Factors affecting choice of food preservation method	In small groups, select fruits or vegetables to preserve in a class foods laboratory, delegating a type of preservation to each group so that all types are represented. After your group has preserved the food, brainstorm a list of factors a person might consider before choosing that method of preservation (time, skill, equipment, storage containers, storage space). Share your lists with the class. Identify reasons for selecting a preservation method and values which underlie those reasons. Discuss the purchase of dried fruits and vegetables at the supermarket--especially if they are stored loose by the pound. Investigate and compare storage principles for dried fruits and vegetables.
	Advantages and disadvantages of each method	In groups of four, brainstorm advantages and disadvantages of each preservation method. Share your lists with the class and check against resources. Are there circumstances under which a method might be impossible or impractical to use?
	Home preserved vs. store preserved foods	Obtain a variety of home preserved and store preserved samplings of the same or similar foods. Trace the life of the food from garden to processing to table and compare the foods as to taste, price, nutritional value, time of preparation and ecological considerations. In groups of three, decide which form of preservation for this food would be the best buy. List factors and values which influenced your decision. Share your decision and reasons which support your decision with the class.
	Food additives	Using resources, define food additives. List food additives used frequently in preserving the quality or characteristics of foods and the types of foods with which each of these additives is commonly used.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food additives (continued)	Divide into two groups, one representing food manufacturers and one representing consumers. Using resources, research the pros and cons of using food additives. Debate the statement--Food additives are beneficial and should be used widely in the processing of foods.
	Use of preserved foods	In groups, select different food preservation methods and preserve different food using selected method. Compare time, energy and money costs of home versus commercial preservation.
	Sources of food preservation information	Brainstorm a list of sources of food preservation information in your community. Investigate each source to determine accessibility or availability. Are all of these sources good sources? What might be the consequences of receiving misinformation concerning food preservation? IEE--Keep a journal outlining your family's general plan for preserving foods. Indicate how aspects of the practical reasoning process may or may not have been used. Keep a record of your experiences in preserving fresh fruits and vegetables for home use. FHA/HERO--Advertise a kid for hire money-making project to assist community members in food preservation projects.

Dry Your Own Food to Save Resources

FN 4.12

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There is an ever-increasing interest in going back to the basics; being more self-sufficient, saving resources, using less preservatives or additives in foods and having more "healthy" foods. One means of accomplishing this return to the basics is to do more home gardening and to preserve the excess produce, for example by dehydration.

Through a preservation unit which includes the dehydration of foods, students will learn about an easy method of preservation, and recognize textural, color and flavor changes which occur during the process. The moisture content of dried foods will vary from 5 to 25 percent. The effects of reduced moisture in foods can be studied by following bacterial action during an extended storage time of the dried products.

Dehydrated foods provide a good source of nutritious foods which can be used later as snacks or in meals. Dried foods are light in weight and thus easy to carry in lunches, camping or hiking. With less bulk and weight, dried foods require much less space for storage.

By preserving and preparing foods in the home, preservatives and additives may be omitted in the processing. For instance, the consumption of sugar and salt could be reduced by omitting it from many food preservation processes. This will reduce the cost of the ingredients and help prevent potential health problems.

A big advantage of dehydrating foods either in the classroom or at home is that the process may be accomplished without the added cost of specialized equipment. Solar drying is the easiest and least costly preservation process and it provides very satisfactory results.

Preparation of Food for Drying

Drying food does not improve its quality, so only fresh, top quality foods should be used. If the food is not of a quality to eat now, it should not be dried.

Foods such as chives, onions, herbs, mushrooms, okra, parsley, peppers and tomatoes may be dried without blanching. Some vegetables require blanching in order to inactivate the enzymes which are present and may cause off flavors.

Fruits, like peaches or apricots, which tend to turn brown must be treated with ascorbic acid, acidic fruit juice or be sulfured to prevent the discoloration which occurs when air is present.[1] The sulfuring process must be done outside because of the irritating fumes which result from the process.

Fruits or vegetables to be dried should be diced or sliced ⅛ to ¼ inch thick. If meat is to be dried, very lean cuts of meat should be used to prevent rancidity which might occur if meat of higher fat content is used.

The prepared foods are placed on racks or trays and dried in the sun, a kitchen oven or an electric dehydrator. The food is exposed to the heat source until it is dry but pliable. Drying times will vary with the food and method.

Drying Methods

The drying methods used will vary depending upon the resources available. The most inexpensive method to dry food would be to let the sun do the work.

Solar. Solar drying requires a temperature of over 98°F and low humidity. A method to prevent insect or animal contamination of the food is desirable. Turning the food during drying will speed the process.

Trays of prepared food in a single layer should be covered with cheesecloth and placed in the sun. Dryers may also be constructed which help concentrate the heat and circulate the air to dry the food faster.[2]

Another method which will concentrate the heat is to place a tray of food in the back window of a car. With the windows closed, heat will build up allowing the food to dry. Closing the windows also will keep out insects and animals.

Problems in solar drying of food:

—too low a temperature will cause the food to spoil
—too high a temperature will result in a loss of color and nutrients
—the possible contamination of the food by insects or animals
—rain or early morning dew on the food
—a longer time is required than with an electric dehydrator

An advantage of solar drying of food is that no special equipment is needed for the drying, thus making it an inexpensive process.

Oven. No extra equipment is required when an oven is used to dry foods, but food that has been sulfured should not be dried in an oven because of the sulfur fumes that are given off.

Cheesecloth can be placed over the oven racks with the food placed directly on the cloth, or trays of prepared food may be placed on the racks making removal from the oven easier. Four to six pounds of food can be dried at one time in an oven.

The oven should be set at the lowest possible setting which can be maintained at an even temperature (140–150°F). The oven door must be kept open four inches to allow the moisture to escape. A small fan could be placed near this open door and directed into the oven to aid in air circulation. Drying food in an oven indoors might not be an acceptable procedure during the summer if the house is air conditioned.

*The author is indebted to Dr. Marie Knickrehm, Professor, Human Nutrition and Food Service Management and to Dr. Anna Mae Brenner, Associate Professor, Human Nutrition and Food Service Management, for their assistance in the preparation of this manuscript.

[1]Deanna DeLong, *How to Dry Foods* (HP Book, Fisher Publishing, Inc., 1979).

[2]Martin W. Miller, Frank H. Winter, and George K. York, "Drying Foods at Home," USDA Home and Garden Bulletin No. 217 (January 1977); Gerald Hundley, "Solar Dryer," *The Agricultural Education Magazine* (May [illegible]), p. 18.

Source: Illinois Teacher, November/December 1983. 296

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Care must be maintained to keep a low temperature to prevent scorching the food as it dries. Scorched food will have an undesirable flavor and color change as well as nutrient loss.

Dehydrator. To save some of those scarce monetary resources, try constructing a dehydrator. There are many sources of plans, some of which are quite simple and easy to follow for electric and nonelectric dehydrators (see DeLong, ref. 1 and Miller, ref. 2). A dehydrator that has a fan to circulate the air will be the most efficient.[3] Using a dehydrator indoors during the summer will add to the humidity and heat of the home which in turn could add to the cost of energy to cool the home. A portable dehydrator is much more flexible since it will not tie up the oven and it can be used in all kinds of weather, either in or out of doors.

A dehydrator with several shelves allows more food to be dried at one time. Strong flavored foods such as onions may need to be dried separately to prevent the flavor from being absorbed by other foods.

Some combination microwave convection ovens may have directions for drying foods. The manufacturer's written procedures for this process should be followed. Only herbs are recommended to be dried in a regular microwave oven.

[3]J. F. Sullivan and H. Weber, "Home Dehydrators For Food Preservation," *Home Economics Research Journal*, 10(4) (1972), 411.

Dried Food Storage

When sufficiently dry, the food is placed in plastic bags with all air removed and the bag sealed. If the container is not properly sealed, moisture will enter and microorganisms may become active as a result of the increased moisture.

Dehydrated food should be stored in a cool, dry, dark area. Many foods can be stored for six months or longer. Low temperatures for storage will extend the shelf life of dried foods.

Dehydrated foods may be eaten out of hand as a snack food or used in many types of cookery such as soups, stews, casseroles and sauces. An especially tasty and easy way to prepare a dried fruit product is fruit leather, which is now being marketed as a snack food in supermarkets and called "pocket fruit." It is pureed fruit dried in a thin sheet.

Conclusion

Dehydration is an interesting and enjoyable activity which can involve the entire family either with the process or in consuming the final products as nutritious snack foods or combined in other food items. Drying of excess foods grown in the home garden is a method of preserving foods which requires very little additional equipment. This helps to reduce the costs involved in food preservation.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Procurement/Food Sources

HOMEMAKING SKILLS

- Develop awareness of new food sources

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR		Imagine it is the year 2025. You are a food engineer in charge of developing a plan to feed the world population of 8 billion people. Create a list of foods you think might be a part of your plan to meet the nutritional needs of the world population. Share your list with the class. Generate possible problems with using these foods. What information might you need in order to develop such a plan? Why should we be concerned about new food sources for ourselves? Our family? Our society?
	Factors affecting the development of new sources	Using resources, research factors which have influenced the development of food sources in the past (population growth, societal changes, technological developments, chemical changes, world food supply). Share your list with the class. Examine the following situations and identify ways they might affect the development of new food sources. --Beef is ruled cancer-causing. --Cities are developed within space stations. --Breastfeeding becomes unpopular. --A restaurant wishes to serve steaks at very low prices. --A food company must attract a new market to survive. --Diabetics wish to eat foods tasting like sugar.
	New food sources now on the market	Visit a local grocery store and identify foods which represent new foods on the market less than five years. (Fruit, rolls, store shelf milk, synthetic fruit juice powders.) Purchase and prepare these products for taste testing. Compare cost, taste, time of

PROCESS SKILLS	CONCEPTS	STRATEGIES
	New food sources now on the market (continued)	preparation, nutritional value. Would you buy and eat these foods? Why or why not? Identify values which underlie your decision. Using resources, research new food sources now in the process of being developed. Examine reasons for the development of these food sources. List positive and negative consequences of the new sources. Share your findings with the class. What effect will these new food sources have for you, your family and society?
	Food in the future	Discuss: How old will you be in 2001? What do you think you will be doing (job, family, location)? Do you think you will be eating the same foods you enjoy now? Read *Dining in A.D. 2001. Discuss areas of agreement, disagreement, "surprising" statements. How do you think you would feel eating the foods mentioned in the article? Why might it be necessary to eat these foods?
	Reflection	Complete the following statements. --When I think about trying new food sources, I feel..... --I believe the development of new food sources is..... --As we have studied new food sources, I have learned..... --I feel I could encourage the development of new food sources by.....

FN 4.13

DINING IN A.D. 2001

By

Emily and Per Ola D'Aulaire

Meatless meat? Grapeless wine? Polyunsaturated cow? They are here already. And look what's coming!

The year is 2001, and it's dinnertime at the Smiths'. The menu: pot roast, peas and potatoes, with wine for Mr. and Mrs. Smith, and milk for Junior.

Nothing unusual in this, except that the roast isn't meat; it's made from high-protein soybean meal almost indistinguishable in taste from the real thing. Even though the season is midwinter, with snow on the ground, the Smiths' vegetables are locally grown and fresh; they come from a nearby "factory"--a huge, automated greenhouse where light, temperature and nutrient-bearing water sprays are computer-controlled for growing produce year-round. The wine, round and mellow, has never seen a grape; it's manufactured from whey, a dairy by-product formerly discarded by cheese makers. Finally, Junior's milk has been drawn from the latest biological marvel, a "polyunsaturated cow"; although it tastes like old-fashioned milk, it has much lower quantities of the saturated fats people have been trying to avoid.

Sound far out? Not at all. Every one of these "future foods" is already here. In fact, total sales for fabricated foods should reach $11 billion in 1980. And more exotic developments are on the comestibles horizon. "We'll be seeing many more changes in the way food is produced, processed and sold," says Howard Mattson of Chicago's Institute of Food Technologists. "But the basic shape of things we now have on the table won't change. We won't be downing little pink pills and calling it supper."

What does lie ahead? More meatless meats, for one thing. Already off and running are such fabricated foods as "ham," "bacon," "steak" and "sausage," all made from soybeans. Jean Mayer, former professor of nutrition at Harvard University and current president of Tufts University, estimates that direct meat substitutes, or extenders, which can be added to real meats like hamburger, will compose about 10 percent of total meat consumed in the United States by 1985, with a much higher level reached in the early 21st century.

Why the dramatic increase? Economy, for one thing. It is cheaper--and more ecologically sound--to utilize the high-protein content of a pound of soybeans directly than to cycle it first through cattle, which need up to about nine pounds of vegetable-protein feed to produce a single pound of meat. It is probably more healthful, too. Vegetable products in the right combination contain all the proteins, carbohydrates, fats, vitamins and trace elements needed for good health, without the potentially harmful saturated fats and cholesterol contained in animal products.

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What about taste? So far, at least, no one has been able to match the mouth-watering flavor of a charcoal-grilled T-bone steak--though they're getting closer all the time. However, hamburger extended with 25 percent soybean protein already tastes as good as 100 percent ground beef.

Fabricated (which does not necessarily mean artificial) foods are by no means new. Bread, after all, is not found in nature; it took man to arrange the raw ingredients. Ice cream and yogurt are other fabricated standbys. Imitation cheese, made with corn oil, has been on the market for some time, as have non-dairy creamers of polyunsaturated soy oil, bologna made from turkey or chicken, simulated fruit based on seaweed and gelatin, and grapeless wine.

Even some of our most traditional fare, while remaining essentially unchanged in appearance, is headed for technological change. At the U.S. Department of Agriculture's Animal Research Center in Beltsville, Maryland, scientists have raised cattle whose meat and milk contain reduced amounts of saturated fats--ingredients that are suspected of contributing to heart disease.

The secret of this biological slight-of-hand is to feed the animals drops of polyunsaturated safflower oil coated with a layer of protein that has been treated with formaldehyde to prevent it from breaking down and converting into saturated fat in the ruminants' digestive systems. Instead, the vegetable oils reach the animals' tissue and milk intact, where they replace saturated fats and--presto!--create polyunsaturated cows.

Not even the chicken has escaped the scientists' scrutiny. With the increased emphasis on body weight in poultry--it costs less to produce a small number of large birds than a large number of small ones--the 21st century could see chickens as big as turkeys and, conceivably, turkeys the size of ostriches!

No less revolutionary are the so-called vegetable "factories." Situated near their markets and programmed for year-round growth, these giant greenhouses--adaptable to climates from arctic cold to desert heat--could turn out many times the amounts of greens presently grown in natural surroundings.

On an experimental level, they are already here. The Environmental Research Laboratory (ERL) at the University of Arizona maintains several "controlled-environment-agriculture" greenhouses covering more than three acres under one roof. No fertile soil is needed, only sand--one of the earth's most abundant materials. Temperature, light, water with dissolved plant nutrients, and atmosphere are all computer-controlled.

Since the environment is sterile and self-contained, only a bare minimum of pesticides, and fungicides is needed. A plastic liner underlying the sand prevents seepage, reducing water consumption by 90 percent over what is needed in an open field. In a yield comparison of tomatoes and cucumbers grown in a controlled-environment facility in the desert of Abu Dhabi and in fields in the United States, ERL scientists found the yields, with year-round harvesting, dozens of times greater.

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As for shopping, with gas prices on a one-way trip up, we may someday be ordering our food from home, perhaps via computer terminals tied by a telephone circuit to robotized warehouses. Just program in your favorite meals for the week; all the necessary ingredients, in exactly the right amounts as determined by a central computer, will be delivered to your home, much like the daily mail.

Meanwhile, pass the soybean pot roast, toss the vegetable-factory salad, pour the whey-out wine and let's toast the 21st century. Bon appetit!

Source: "Am I Obligated to be Well Nourished?" Pennsylvania State University.

PERENNIAL PROBLEM What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT Procurement/Purchasing--Preparation at Home

HOMEMAKING SKILLS

- Develop shopping skills
- Identify labeling/grading information

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Shopping skills	Answer yes or no to the following questions. How would you rate yourself as a food shopper based on the number of yes answers? Are these skills important in shopping for food? Why or why not? --Do you plan carefully for grocery shopping by making a shopping list? --Do you read labels on food containers and packages? --Do you very seldom shop when you are hungry? --Do you make only one trip to the grocery store each week? --Do you compare prices between different brands of the same product? --Do you buy the amount of food which is right for your family's needs? --Do you seldom decide to buy a food item that was not already on your list? --Do you compare store specials in the newspaper? --Do you compare coupon prices with regular prices to see which is lowest? --Do you know about how much you would like to spend on groceries before you go shopping?
		In groups of four, use resources to make a list of shopping skills. Select the two you think are most important and role play two situations--one in which the shopper uses these shopping skills and one in which the shopper does not use the shopping skills. As each group performs the role play, list the skills on the chalkboard until you have a complete list. What would happen if you never used any of these skills in shopping? What would happen if you used these skills all the time?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Shopping skills (continued)	Compare the two following situations and select the person you think is the best consumer. Share your selection with the class, giving reasons for your choice. As a class, reach a consensus as to who is the best consumer. --Loretta does not prepare a shopping list in advance because she prefers to see what they have before she buys anything. --Allen writes out in detail what he will buy and comments, "If the store were selling eggs at 10¢ a dozen, I would not buy them unless they were on my list."
	Labeling •Information	Examine a variety of food labels and list all information which a consumer can learn from a food label. (Ingredients, amount, name of food, manufacturer, savings, nutrients.) Share your list with the class. How can this information be used by consumers? How might the various information affect decisions about food purchasing? Summarize your findings by designing a bulletin board--What can you learn from a label?
	•Laws	Using resources, identify laws which regulate the labeling of foods and their effect on food purchasing decisions.
	•Nutrition labels	In groups, compare nutrient level, caloric content and price of one of the following food groups. What factors would influence your selection of the best items to buy. Groups compare differences in choices and reasons. Group 1--Five types of breakfast cereal. Group 2--Yogurt, cottage cheese. Group 3--Four types of cheese. Group 4--Four frozen vegetables. Group 5--Peaches canned in own juice, peaches canned in heavy syrup. Group 6--Sugar free soft drink, caffeine free soft drink, regular soft drink. Group 7--Four types of fruit (weigh after water or syrup is removed).
	•Grades of food	Collect food labels for the following foods--eggs, canned or frozen fruits, canned or frozen vegetables, meats. Make a classroom display of these labels and identify the various grades of foods available. Using resources, identify what each grade means and factors which would affect the selection of each (cost, what the food will be used for, quality, appearance).

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Labeling •Grades of food (continued)	In groups of three or four, open varying grades of canned fruit. Compare the fruit in appearance, flavor, texture and cost. Brainstorm uses for each grade based on your findings. Illustrate your information and suggestions by making a chart. Share these with the class. Are varying grades of fruit useful to consumers? To manufacturers? Why or why not?
	•Open dating	Using resources, identify ways in which dates are used on foods (sell date, freshness date, pack date, expiration date). On which foods are these dates usually stamped? Are these dates beneficial to the consumer? To the store owner? Why or why not? Whose responsibility is it to check those dates?
	•Unit pricing	Using resources, define the terms net weight, drained weight, and unit pricing. Examine two brands of a canned vegetable product. Record the price, the weight, and the unit price of each brand. Which brand represents the best buy assuming all else is equal except price? List reasons for your answer and identify the values which underlie your reasons. Complete the questions on shopping skills at the beginning of this unit and rate yourself as a food shopper a second time. Has your rating increased or decreased? Why or why not? IEE--Take over the family grocery shopping for one month. With your family, make a written plan of what to buy. After you have been shopping, note how much time it took and how much you spent. In a few paragraphs describe your experience. What did you learn from your experiences? Would you do some things differently the next time? Why? Would you do some things the same? Why? What suggestions could you give other shoppers or the store owner based on your experiences?

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Procurement/Purchasing -- Preparation at Home

HOMEMAKING SKILLS

- Develop shopping skills
- Plan food budget

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Factors affecting food purchasing decisions	Imagine that you have your own apartment. Create menus for breakfast, lunch and dinner for one day for yourself and write a shopping list for your trip to the grocery store. Visit a local grocery store and decide which items you would buy based on your list. Record the brand name, size of package, its location in the store and whether it was on special or purchased with a coupon. After you return from your trip, divide into groups of four and compare what you would have purchased by answering the following questions. --Did you make similar decisions on some items? Why or why not? --What brand names were represented? Why did you choose these? --What were the differences in prices? What can these differences be attributed to? --Was the position of an item in the store ever a factor in any of your decisions? --Did you use any special offers or coupons? Why or why not? --Did you add any items at the last minute? Why or why not? After your discussions, list factors which influence food purchasing decisions. Why should we be concerned about these factors for ourselves? Our families? Our society?
	Hints for purchasing foods	Working in small groups, select one of the following categories. Using resources, research hints for purchasing foods from that category. Share your findings with the class by compiling all the hints into a booklet "Helpful Hints for Purchasing Food."

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Hints for purchasing foods (continued)	--meat, poultry, fish and eggs --milk and milk products --canned goods --fruits and vegetables --fats and oils --cereal and grain products
	Seasonal foods	Using resources, make a list of foods which vary considerably in price from one season to another. Make a calendar of the year and indicate what foods are available at each month of the year. Is this information valuable to a consumer? Why or why not?
	Generic, store or name brand	Using resources, define name brand, generic and house brand. List name brands of foods you have seen sold in grocery stores. In a trip to the store, record the price of each brand on a similar food. Buy and examine the overall quality of the various name brands. Which would you buy? Give reasons for your choice. Identify the types of values underlying your reasons.
	Convenience foods	Using resources, define convenience foods. On a trip to the store, find five examples of each of the following--mixes, fully cooked foods, baked and frozen foods, ready-to-eat foods, ready-to-heat-and-serve foods. Plan and prepare simple meals using only convenience foods. Compare the cost, time of preparation, energy involved in using convenience foods. What factors would influence your decision to use convenience foods?
		In groups of three, read the following vignettes. Identify foods you would most likely prepare in each of these situations? Would you use any convenience foods? Why or why not? --You receive a phone call from your cousin while you are at work. You have not seen her for five years and she will be passing through town tonight and can see you for only an hour. You ask her to dinner at your home for 6:00 p.m. After you hang up, you realize that that gives you only 30 minutes to make dinner. --You have been planning a big celebration to welcome your sister back from a long year of service in the military. As you begin to prepare the food, you receive a phone call that she will be here in an hour! That is four hours sooner than you had planned. --Your best friend is staying all night. She must be at work at your usual time for getting out of bed. Also, she is used to eating a big breakfast and likes to sleep late.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Convenience foods (continued)	--A friend calls with a problem she wants to talk over with you. You invite her over for dinner in 10 minutes even though you have no idea what you will prepare.
	Universal Product Code	Using resources, research the Universal Product Code. What are the positive and negative consequences of the UPC for consumers? For store owners? For manufacturers?
	Values influencing food purchasing decisions	In groups of three, read the following vignettes and identify values underlying each behavior. How do values affect food buying decisions? List values which influence your food buying habits. --Valerie shops at a food specialty store where she frequently sees all her friends. --Dale never considers buying generic brands. --Brenda buys dried milk which she reconstitutes for her kids to drink. --Vera rarely buys foods of fancy quality. --Joe purchases less expensive cuts of meat, avoiding the choice cuts.
	Low cost vs. high cost meals	List foods which add to the cost of a meal but contain little nutritive value (jelly, whipped cream, pickles, ketchup). Why are these items used? List values which underlie those reasons. Create sample menus for three days. Using food selections of the newspaper, compute the cost of each meal. Identify which meals are low cost and which are high cost. Which factors contribute to the cost of a meal?
	Techniques used by the store to influence consumer decisions	Plan weekly food budget at three levels for a family of four persons.
	•Impulse buying	Using resources, define impulse buying. Read each of the following situations and determine its influence on impulse buying. --Shopping while hungry is a habit of Jeanna's. --Stacey takes her son who is 4 years old whenever she goes shopping. --As Dave enters the store, he smells the cookies baking in the deli. --Brenda has waited one-half hour in the checkout line beside the snack items. --Bill notices the shortcake right beside the fresh strawberries.
	•Special offers	Using resources, make a list of special offers available (sale items, coupons, cents-off, two or more packaged together, free gift, free samples, free recipes). Bring in

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Techniques used by the store to influence consumer decisions (continued)	examples of these to share with the class. Are these special offers helpful to consumers? Why or why not?
	•Coupons	Using food sections of the local newspaper, identify special offers and coupon prices with other stores and with different brands in the same store. Using resources, plan a pro or con argument for the following statement, "Consumers should use coupons and save money." Discuss arguments presented to the class. IEE--Do family food shopping using coupons. Calculate savings as percentage of food dollar.
	•Location of foods in the store	Take a walk through a local supermarket, noting the placement of staple foods, novelty items, nonfood products, specials, and brand name products. As a grocer, would the location of these items be advantageous to you? Why or why not? Where do you find the items that are most likely to be on your shopping list. Why are they there?
	•Services for customers	Using resources, identify services which grocery stores provide for customers (charge accounts, delivery service, late hours, money machines). What situational factors would influence your choice of store for grocery shopping. Who pays for these services? Do they add to the price? Why or why not?

PERENNIAL PROBLEM — What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM — What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT — Procurement/Expenditure of Food Dollar

HOMEMAKING SKILLS

- Compare costs of food for home vs. away from home
- Identify factors affecting food prices
- Plan food budget

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Make a list of the foods you have eaten within the last 48 hours. Beside each food indicate where you obtained the food (made at home, purchased at a restaurant, purchased at a fast food chain eaten at home). Share your lists with the class. Why should we be concerned about how we spend money on food? Does the way you spend money on food make a difference to your families? To society?
	Sources of attaining food for home preparation	Using resources, identify the types of stores where a consumer can purchase groceries (supermarkets, specialty stores, food warehouses). List consequences of using each of these types of stores.
		Select eight food products which are widely available. List the brand and weight of the food product. List all the various places in the community where these items could be purchased (supermarket chains, discount supermarkets, convenience stations, food co-ops). Predict which will be less expensive and most expensive. In groups, visit the store to determine the following information for each food item: name of store, location, store hours, special services, special sales on that item, missing services, cost of item. Summarize your findings in a chart. Draw conclusions, listing factors which influence selection and consequences of using each type of store.
	Sources of attaining food to eat away from home	Using resources, identify the types of restaurants where a consumer can purchase ready-made foods (fast food chains, carry-outs, formal, family, cafeteria). In small groups, select one type of restaurant and brainstorm a list of consequences of using that type of restaurant.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Sources of attaining food to eat away from home (continued)	Imagine and write a paragraph describing how your life would be different if there were no restaurants. Share with class. Compare paragraphs and identify factors related to--nutrition, economy (costs), social life, ethnic foods, gourmet foods, other. In small groups, develop a description of a family. Identify restaurants in your community that the family might choose if interested in nutrition, economy, social life, ethnic foods, gourmet foods, other. Give reasons for your choices. You and your father arrive home and find $5 and a note from your mother. "Use this money to eat dinner this evening." Brainstorm your various alternatives? Which would you select? Would your choice vary under these different situational factors? --You are with friends instead of your father. --You have $10 instead of $5. --You have $25 instead of $5. --You only have 30 minutes to eat. --You have the whole evening to eat. --You are on a diet. --You want to impress your father with your cooking skills. What would be the long-term consequences of eating out constantly?
	Factors affecting the decision to eat out or at home	In groups of four, create a menu that could be purchased at a fast food chain. Research the cost, time, energy and quality of the food involved in buying the menu at the restaurant. Then research the cost, time, energy and quality of the food involved in making the same menu at home. What differences do you notice? Which of these alternatives would you prefer? List reasons for your selection and values which underlie those reasons. Would your selection differ under different situational factors? Why or why not? Share the highlights of your decision with the class and compile a list of factors affecting the decision to eat away from home or in the home.
		Using resources, identify statistics indicating how many meals the average American eats outside the home. Has this statistic changed over the past ten years? In small groups, brainstorm possible reasons for this trend (increased mobility, parents working, single parent families) and share these with the class. What are the consequences of this trend?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Costs	Use menus from area restaurants. Compare costs of menu items to home and convenience prepared foods. Use activity similar to "The Price Is Right," guessing the actual price of displayed items.
	Factors affecting food prices	Using resources, identify trends in food prices over the past ten years. Research factors which have influenced food prices and consequently these trends. Compile a chart which displays your findings. Why should we be concerned about food prices for ourselves, our families, and our society? Using resources, identify the percentage of the food dollar which covers supermarket costs, farmer profit, packaging, transportation, middleman profits, non-farm labor costs, value of the food. Read the following vignettes in groups of four and predict the effect of each of the situations on food prices. Brainstorm a list of all factors which affect food prices, then check your list against resources. --A flood in the south central region of the U.S. has completely wiped out much of the vegetable crop. --A recent strike by plastics workers has resulted in a 25 percent increase in their wages. --Truckers have decided to take a cut in pay in order to maintain the number of jobs which have always existed. --As Thanksgiving nears, many consumers are purchasing turkeys, which are in heavy supply. --A food retailer, who makes less than 1¢ profit on every dollar sold, experiences frequent incidences of shoplifting costing him about $1,000 per week. --Electricity rates continue to climb.
	Ways consumers can deal with problems of spending their food dollar	Invite a consumer advocate in to speak to the class on the history of how consumers have battled high food prices and other consumer problems related to food purchasing. In summary, discuss the various alternatives for handling-- --After several visits to the same restaurant, Allison is disgusted with the huge portions. Half portions are not available.

PROCESS SKILLS	CONCEPTS	STRATEGIES
PR	Ways consumers can deal with problems of spending their food dollar (continued)	--Tom is frustrated with the long checkout lines at his local supermarket. It matters not what time of the day he does his shopping. --Rhoda's supermarket has recently installed computer checkout using the Universal Product Code. They have stopped marking the price on each item, causing her frustration as she tries to compute the cost of the groceries before going through the checkout lines. In small groups, read the following case study and use the practical reasoning process to resolve the question--What should the Lombardo's do about rising food costs? The Lombardo family believes that for many years they have lived well. Mr. Lombardo and his wife have five children and also support Mrs. Lombardo's mother who lives with them. In the past year, however, it seems the cost of living has surpassed Mr. Lombardo's salary. Food costs have become so expensive that a large percentage of their income now goes for food. What should the Lombardo's do concerning these high food prices? Share your solutions with the class. What would it be like if everyone in the world followed the Lombardo's solution? IEE--Chart your family's eating habits for a week, noting money spent on food and where food was purchased. Evaluate the family's eating habits using the following questions. --Are nutritional needs being met? --Is a reasonable amount being spent on food? --Is a reasonable amount of time being spent on food preparation? --Are family members satisfied with eating habits? If needed, devise a plan for your family to make changes in money spent on food and where food is purchased. Keep a journal documenting the implementation. IEE--Analyze percentage of your family food dollar that is used for meat, fish, poultry; dairy products; fruits and vegetables; breads and cereals; soda pop. Chart and compare results.

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PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors affecting the amount of money spent on food	Using resources, research the following statement--"The higher a family's income, the smaller is the proportion of money spent for food, while the lower a family's income, the greater is the proportion of money spent for food." What are the reasons which support this statement? What are the implications for low-income families? High-income families?

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Health--Safety

HOMEMAKING SKILLS

- Identify safe and healthful food habits
- Store and handle food safely and properly

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Unsafe and unhealthy practices	Using one laboratory kitchen, have a "hunt" to locate unsafe and unhealthful practices which have been "planted" in that kitchen. Hunt for practices or items such as pot-holder near a burner, pot handle turned toward the front of the range, electric cord extending over edge of counter, unlabeled bottles of potentially dangerous chemicals stored under sink, knives left on countertop, cupboard doors open, eggs and meat left setting out, soiled and disorganized countertops and meat on cutting board. Set a baby doll on the kitchen floor to represent a child playing. See who can find the greatest number of unsafe, unhealthful practices in a set length of time. Share above findings--using large white paper, list unhealthful and unsafe practices. Classify into two categories: Health--freshness and wholesomeness of food Safety--protection of those preparing foods Discuss each unsafe and unhealthful practice and suggest ways to prevent. Do *Kitchen Safety worksheet.
	Unsafe and unhealthy practices directly related to foods laboratories	Examine other resources for more health and safety precautions--research safety guidelines. Make large posters to display in foods laboratory outlining these guidelines. Include dishwashing techniques/clean-up techniques, kitchen cooperation (wiping up spills, keeping knives out of dishwater), emergency situations--fire injury, using small appliances and personal hygiene.

PROCESS SKILLS	CONCEPTS	STRATEGIES
162. PR	Unsafe and unhealthy practices directly related to foods laboratories (continued)	Create minute dramas concerning health and safety. Identify guidelines the minute dramas portray. --Kitchen member uses a dish towel to pick up a saucepan, forgets to turn off the range, puts towel on shoulder. --Kitchen members did not plan well, therefore, no one knows what they are doing. Kitchen members make spills and do not wipe up, waste time, argue, run into each other with bowls, skillets and equipment. --Two kitchen workers discussing last night's party accidently lean against the range while in use. Pot handles are turned outward. Discuss alternatives and consequences of using unsafe and unhealthy practices in meal preparation.
	Personal responsibility for health practices	Read vignette and discuss. --Your lab partner has a habit of licking his fingers as he makes cookies. What should you do? Use practical reasoning to generate alternatives, consequences, and test decision. What should you do if you observed an unsanitary practice in a restaurant? Write a paragraph outlining what you believe are your responsibilities in providing for the health of your family when you are preparing food.

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KITCHEN SAFETY

Mark Yes or No, indicating whether the practice is safe or unsafe.

_____ 1. Use wet potholders.

_____ 2. Lift the lid of a pan on the range so the opening is away from you.

_____ 3. Use a sharp can opener.

_____ 4. Use a knife to remove stuck toast as it is toasting in your toaster.

_____ 5. Use water on a grease fire.

_____ 6. Carry a pan in which there is a grease fire to the sink.

_____ 7. Mix household cleaners if dirt is hard to remove.

_____ 8. Place knives loose in a drawer.

_____ 9. Store cleaning solutions below the sink.

_____ 10. Use dishtowel to remove hot items from the oven.

_____ 11. Tie back long hair.

_____ 12. Keep hot foods hot and cold foods cold.

_____ 13. Store poisons in empty food containers.

_____ 14. Wipe up floor spills immediately.

_____ 15. Cover a pan which contains a grease fire.

_____ 16. Pour salt or baking soda over a grease fire.

_____ 17. Cover food and utensils before spraying with an insecticide.

_____ 18. Be sure the cord is out of the way when using an appliance.

_____ 19. Use aerosol spray cans near heat or flames.

_____ 20. Use electric appliances with wet or dry hands.

_____ 21. Store old refrigerators with the door tightly closed.

_____ 22. Keep flammable objects away from the range.

PERENNIAL PROBLEM What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT Meal Management/Health--Safety

HOMEMAKING SKILLS

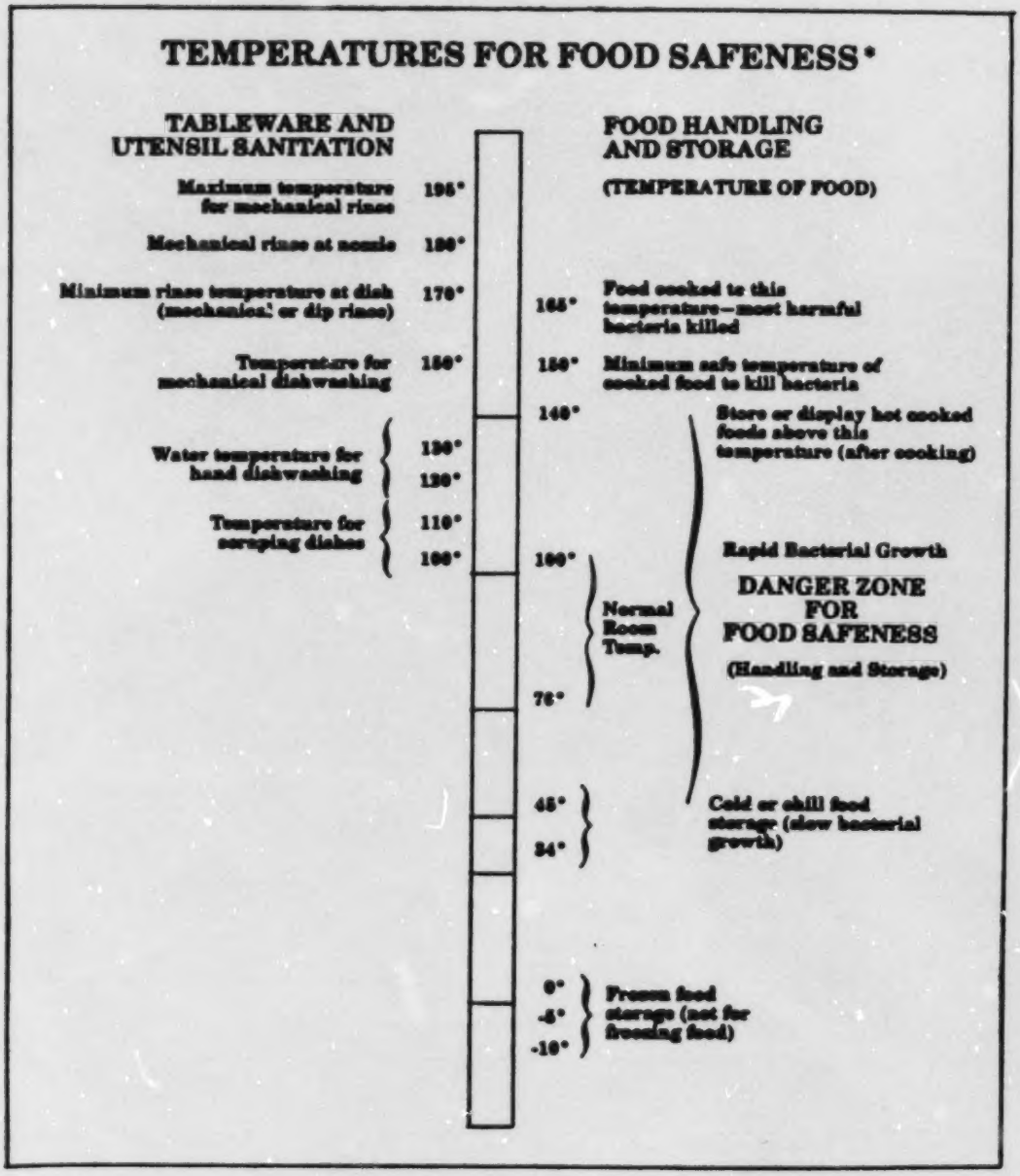
- Develop safe and healthful (meal management) habits
- Provide for safe storage of food
- Identify different types of food contamination

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Have two uncooked chicken legs on a plate. One leg should be left at room temperature overnight and the other refrigerated until you do the activity. Which chicken leg is unsafe? (Smell and feel for any differences.) Oftentimes we can not <u>see</u> unsafe conditions unless we look under a microscope.
	Unsafe and unsanitary food handling	Obtain microscopes from the science department. Prepare slides of microorganisms that may cause food poisoning. (Your science department may already have pre-prepared slides.) Examine the slides and draw what you see. Obtain petrie dishes and grow some bacteria cultures in the classroom. Possible sources might be saliva, dirt from under fingernails, scrapings from a sore or wound, or leftover food. Observe and discuss results of bacteria cultures.
	Food-borne bacteria	Using resources, discuss most common places where bacteria multiply and the symptoms caused by eating food containing the bacteria listed below. --Salmonella --Staphylococcus aureus --Clostridium perfringens --Clostridium botulinum
	Food contamination	List on chalkboard or white paper as many possible sources or ways food can be contaminated and become unsafe. (Your own cleanliness; storage--refrigerator, freezer; leftover foods--handling and storage; preparation--handling, equipment and dishes;

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food contamination (continued)	buying--dented cans, torn packages, leaving groceries in car trunk, thawed and refrozen foods.) In small groups, compare your list with information secured from resources. Make additions to your original list such as industrial contamination (pesticides, industrial water, additives). In groups, discuss each type of food contamination and how it may be avoided. Share with the class.
	Danger zone in food preparation, eating, storage	Make a transparency or handout of the *Danger Zone. Discuss temperatures for food safeness. Make suggestions (*referring to above lists) about how they can have safer practices in the foods laboratory.
	Buying, handling, storing foods	Read *Discovering Food Spoilage. Discuss buying, handling and storing. Be sure to include why the situation or practice is unsafe or unsanitary. Discuss government legislation to protect the consumer. Examine resources and find examples of consumer protection in the food safety area. (Federal Meat Inspection Act, Produce Inspection Act, Federal Food and Drug Inspection Act.) In two groups, one group will devise a menu for a holiday dinner at home. The group should describe safety precautions for purchasing and cooking the foods for the dinner. The second group will decide how to use leftovers from each dish offered on the menu. Describe how each leftover should be stored and how it should be later prepared for eating. What are the consequences if safety practices are not followed? How would these consequences affect you, your family and friends? Plan a family picnic. What foods would be "safe" to take if there were no refrigeration or insulated containers? What foods could you take if you had refrigeration? Demonstrate alternative ways of storing groceries. What factors determine the type of storage different items need?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Buying, handling, storing foods (continued)	IEE--Check foods at home for proper storage. Make provisions for proper storage where necessary.
PR	Reflection	What should you do if your father's late and dinner is ready? Should you keep food on low heat? Put it in refrigerator? Set it off the heat? What are the consequences of each?

DANGER ZONE



*National Restaurant Association

DISCOVERING FOOD SPOILAGE

HERE ARE SOME SIGNS OF SPOILED FOODS:

FISH

Fish is not safe to eat if - it smells sour
it is too limp
the eyes are sunken & shriveled
the meat pulls away from the bone

MEATS

The meat you buy has been inspected for quality. It has been cured or "aged" according to standards set by federal laws. However, beef and pork may not be safe to eat if they - smell sour, have changed color, or break away when pulled slightly.

CHICKEN

Chicken can spoil quickly, either cooked or uncooked. Uncooked chicken, especially, should be kept chilled until ready to be cooked. Some signs of spoiling are - stickiness under wings
dark wing tips
sour smell

BREADS CEREAL

Two things that cause bread and cereals to spoil are -
mold (greenish color, sour odor, and bad taste)
insects (Cereals smell and taste bad. They can leave harmful germs in the food.)

CANNED FOODS

Signs of spoilage in canned foods are - swollen top or bottom of can
dents in cans (Inner coating of the can may break and cause rusting.)
bad smell, foam on top, or milky-looking juice.

FRUIT VEGETABLES

Fruits and vegetables spoil fast after they become ripe.
Some signs of spoilage are - change in the natural color
wilting and shriveling
sour smell
soft and mushy feel
bruises

Source: Ohio Family Life Education Guide.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Resource Management

HOMEMAKING SKILLS

- Apply management skills to meal preparation
- Identify and use available resources

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Make chalkboard or bulletin board entitled "Are You On the Right Track?" Use construction paper parts taped to board - train engine labeled "Planning", cars represent "Resources," "Goals," and "Values," and the caboose is "Action." Each car can be loaded with components. "Resource" car carries time, energy, money, skills. "Goals" car carries meals, snacks, and "Values" car carries nutritious, attractive, tasty, quick. Apply and relate to areas of management activities which you are interested in such as, planning weekend activities, buying a new outfit for an occasion, studying for a test/ babysitting.
	Identification of resources	Discuss resource management and how it affects food preparation, especially in the classroom experience. Generate questions such as: --What resources do we have to use? (Time, energy, money, skills, knowledge, facilities.) Define resources if needed. --What are our limitations? (Length of time to spend on meal preparation [laboratory situation], limited budget, limited supplies, facilities, limited skills and knowledge.) --How do we use our resources to reach our goals? Define goals, if needed. (Group planning in a laboratory situation, co-operative action, compromise, sharing.) --How do values affect our goals, standards, and eventual results? What we choose to do? How will we choose to do it? Define and clarify values.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Identify and prioritize values associated with food preparation	Identify contrasting values which affect meal management.

Values	Very important	Somewhat important	Not important

Establish priorities by numbering above items in order of importance 1 to 15. In small groups, compare areas of agreement and disagreement. As a class, discuss how areas of agreement and disagreement in values, standards and priorities would require co-operative planning and compromising when more than one person is involved. Think of other possible situations.

Compare food prepared at home with food prepared away from home. How is the food alike or different?

Examine the possible consequences of the values that may or may not guide our actions/ decisions. What might be the long-term consequences of valuing,

--Quickness in preparation over concern for the nutritious value of foods?
--Tastiness of foods over concern for the nutritious value of foods?

Compare other values on list.

In separate laboratory groups, plan a dinner menu for four people given different sets of valuable resources. Group 1 gets $1 per person and the homemaker has all day to prepare dinner. Group 2 gets $1.50 per person, but the family is very busy and will not sit down to eat together. Group 3 has $2 per person, but the family has only 45 minutes to prepare the entire meal. Group 4 lives on a farm and must utilize foods on hand. Group 5 is a couple whose employer is coming to dinner, and the couple has only $10 available for entertaining. Discuss the situations as they contribute to the need for resource management.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Discuss students working together in laboratory. Why is it important that they work cooperatively? What are the consequences if they do not? Discuss how your goals, values, priorities and standards may affect those with whom you live or work.
	Budgeting resources	Brainstorm ways we can save or budget our resources while preparing food. Compile a list of ideas (dovetailing, orderly workspace, using both hands, using a tray, elimination of unnecessary tasks, shortcuts, preparation of time plan, check supplies in advance/plan ahead, read recipe carefully before beginning, practice and know preparation skills, dividing and sharing preparation and work chores). List situations when resources must be budgeted and identify ways of managing each situation. --Emergencies --Complex time schedules --Lack of preparation time --Laboratory situation with limited time --Unemployment in the family Discuss how the management process relates to meal preparation. Discuss steps, review goals, examine resources, make a plan, carry out and adjust plan and evaluate. GOAL--prepare a balanced breakfast. RESOURCES--foods available, time, skills, identify in detail. MAKE A PLAN--steps in preparation,who does each step, timing, use a chart form. CARRY OUT AND ADJUST PLAN--note problems, obstacles, unexpected occurrences, decisions that had to be made. EVALUATE--use specific questions that relate to food prepared in laboratory. In groups, plan a simple laboratory experience as a group. Answer questions such as--What skills do we need to improve? What are our limitations and how can they be overcome?

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Resource Management

HOMEMAKING SKILLS

- Identify and budget available resources
- Apply management skills to meal preparation

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Try to juggle three small plastic balls. What does the juggler have to do to keep the balls moving? (Timing, coordination, skill, practice, energy.) What if we add two more balls? (More complex task, complicated.) How is being a juggler like being a manager? (Lots of things to work with, consider perfecting skills, requires lots of practice to perfect skills and be in control.)
	Use of alternative food resources	Do *Food Resource Homemaker Survey. Summarize interviews in chart form. Discuss ways to best use the food resources available to us.
	Define management	What is management? Brainstorm a class definition. Why is management important during meal preparation? (Using time wisely, save energy, have all parts of the meal come out at the same time, enjoy meal preparation, less stressful if more organized.) What may affect our ability to manage? (Available resources, past experiences, interests, others involved, established limitations.) Review management process (planning, resources, goals, values, standards, priorities).
	Identification of resources	Use reference materials and texts to identify resources which are used in meal management and the preparation of foods.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Identification of resources (continued)	

Human Resources	Economic Resources
Time Energy Skills and abilities Knowledge	Money Fuel, water Facilities and equipment Supplies

Resource trade-offs

Draw second chart below on board (might also set up a display or tasting activity for extra motivation). Compare and contrast what student values in each category.

Cake from a recipe	Cake from a mix	Bakery cake
Requires baking knowledge, skills, energy, uses time, may require more money	Easier, doesn't take much time	Cost more, can be decorated for special occasions, doesn't require skill or time

From the resources listed on first chart, which ones are used in preparing a cake from a recipe, a cake from a mix, buying a cake at a bakery? Compare and contrast. What do you value in each choice?

These are trade-offs. Sometimes we trade off price for time. We pay more in order to save time. Think of other trade-offs.

Plan a foods laboratory by making a list of five details each person is expected to perform (e.g., set table, cream-blend butter and sugar, wash dishes). Give each person $5 in pretend money. During the lab you may either complete your assigned tasks or pay someone else $1 to complete each of your tasks. At the end of the lab you may use what money you have left to buy the product prepared. Discuss the potential trade-offs (e.g., time, energy, money) that were involved in the experiment.

Develop case studies/skits to practice identification of resources, setting priorities and identifying standards. After small groups reach decisions, discuss how value affected the decisions and, as a result, how different decisions were reached.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Resource trade-offs	Recognize the trade-offs and sharing of resources. Analyze the following situations. --Save time and energy by buying convenience foods--may cost more for groceries, preservatives and additives could be harmful, may sacrifice quality or not meet standards. --Use small electric appliances to save gas or electricity but spend a great deal of money on appliances and have a storage problem. --Plant a garden and preserve produce to save grocery dollars but may have invested a "great deal" of time, energy and money in the garden and supplies, but exercise, fresh air and personal satisfaction are good. --Eat out rather than prepare foods--saves personal time and energy, may be necessary if no skills, may cost more, limited variety if "fast foods" are selected, difficult to get needed nutrients and control calories, may not have facilities to prepare foods. --Use plastic bags for fruits and vegetables--convenient but adds cost and pollution. --Use cloth napkins rather than paper--more energy but less pollution. --Buy food out of season--tasty but may be costly. --Use coupons to save money--requires time and energy.
	Resource conservation	Create uses for used food containers. Plan low, medium, and high cost meals. Calculate nutritive costs. IEE--Prepare these meals. Document family reactions to each. Keep a record of time, energy, and costs of each meal. In small groups, choose a season and identify plentiful foods. IEE--Develop a collection of recipes, testing some, for using plentiful foods for that season. Suggest ways to create nutritious meals from wasted foods (turkey carcass, bread crusts, vegetable peelings). IEE--Develop a collection of recipes, testing some for using leftover or wasted foods.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Meal management	Laboratory experience--use management planning process developed at entry level to plan labs comparing and contrasting convenience food items (frozen, dried); foods prepared from scratch and bakery items. Use chart on chalkboard or handout to compare and contrast quality of food, cost of food, time and energy to prepare. Discuss resources used in each type. Make choices and examine values underlying the choices. What are the consequences when good management is not used in the kitchen? How does this affect you, your family or work group?
	Reflection	As a class, develop a household hints pamphlet listing ways to save time, energy and money in food preparation. Use resources. Distribute to parents.

FOOD RESOURCE HOMEMAKER SURVEY

Directions: Interview several homemakers at different stages of family cycle. Ask:

1. What are the problems you have in dealing with food for your family
   --in purchasing food?
   --in preparing food?
   --in accommodating individual family members' preferences and activities?
   --in storing food - before preparation?
   - leftovers?
2. What resources do you use to provide food for your family?
   --convenience foods?
   --your own preparation skills - preparing foods from basic ingredients?
   --limited food budget?
   --emergency food pantries?
   --food stamps?
   --food from own garden? friends' gardens?
   --Meals on Wheels?
3. How often does your family eat outside the home?
4. How do you decide whether or not to eat out?
5. What factors contribute to your decision to eat out?
6. What successful ways have you found to handle these problems.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Equipment

HOMEMAKING SKILLS

- Select, use and care for kitchen utensils
- Measure accurately

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Utensils used in the kitchen	Place a variety of utensils used in a foods laboratory in a large brown grocery bag. "Grab" an item and provide the following information. --Name of item. --Its use in food preparation. --Technique for use and specific foods with which it is used (wire whisk--eggs).
	Measurement of dry, liquids and solids	Three students come forward, without using measuring cups, spoons, estimate what each thinks is one cup. Then actually measure to see how accurate each estimation was. Discuss the importance of accurate measurements and correct procedures. --Why is it important to measure? --What types of food preparation require more accurate measurements than other types (cakes require very accurate measurement, breads require less accurate)? Think of other examples. In small groups, demonstrate methods for measuring the following ingredients. --Flour --Granulated sugar --Brown sugar --Liquid --Shortening --Spice Make and display a poster listing the steps involved in measurement. Hang in the room during foods laboratory. Read *Recipe Worksheet.

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PROCESS SKILLS	CONCEPTS	STRATEGIES
	Kitchen mathematics measuring, increasing and decreasing recipes	Kitchen mathematics. Measure the following amounts of a dry ingredient. --2/3 cup --3/4 cup --1 1/3 cup --1 pint --3/4 teaspoon --1 1/2 tablespoons (Refer to *Kitchen Math Chart for additional practice measuring activities. Include metric.) Use transparency to show Chart of Equivalents and Measurements. Find various equivalents that you might work with in your own foods laboratory. Do practice problems (increasing and decreasing recipes; adding and subtracting fractions). Demonstrate how to do these math problems. Give sample sets of problems in each area. Include Metric measuring! --Option: "Kitchen math laboratory." Set up stations around foods laboratory with each station being based on a different math problem. Students actually do measuring to get answers. Use computer software for teaching kitchen mathematics.
	Selection, use and care of small appliances and equipment	Display various pieces of cooking equipment and small appliances (double boiler, pressure cooker, electric can opener, mixer, blender, skillets, pans, food processor). Discuss when each piece of equipment might be used. Individually select a piece of equipment. Describe its use. What could be substituted if you did not have that piece of equipment? Which pieces are mainstays in the kitchen? In small groups, research these pieces of equipment. Determine cost, various features, required cleaning and care. Report findings to class. Demonstrate proper procedure for cleaning the equipment and storing properly. Check equipment in the foods laboratory to determine if it has been properly cleaned and stored. Use simple recipe that can easily be divided into step-by-step parts. In small laboratory groups, draw numbers to determine who does each step. For each step, select equipment and demonstrate the procedures to complete the step. When all steps are done share products; evaluate each other as you proceed. Include increasing or decreasing the recipe to evaluate kitchen math section. Example follows.

PROCESS SKILLS	CONCEPTS	STRATEGIES

CHEESE STRAWS

Metric	Customary	Ingredients
240 mL	1 cup	All-purpose flour, sifted
2.5 mL	½ teaspoon	Salt
80 mL	⅓ cup	Shortening
37–45 mL	2½–3 tablespoons	Cold water
120 mL	½ cup	Grated Parmesan cheese
5 mL	1 teaspoon	Paprika

DIRECTIONS

Yield: About 36 cheese straws
Pan: Cookie sheet
Temperature: 218 °C [425° F.]

1. Preheat oven to 218 °C [425° F.].
2. Sift flour and salt together.
3. Cut in 45 mL [3 tablespoons] shortening until the mixture looks like cornmeal.
4. Cut in the rest of the shortening until the particles are the size of small peas.
5. Add cold water by tablespoons, mixing with a fork until the mixture forms a ball.
6. Roll the dough out on a lightly floured board. Dough should be 6 mm [¼ inch] thick and 15 cm [6 inches] square.
7. Sprinkle 30 mL [2 tablespoons] grated cheese and 1 mL [¼ teaspoon] paprika on the dough.
8. Fold the square in half, pinch the edges together and roll out again.
9. Sprinkle with 30 mL [2 tablespoons] grated cheese and 1 mL [¼ teaspoon] paprika.
10. Fold, repeat with grated cheese and paprika two more times.
11. Roll dough to 6 mm [¼ inch] thickness.
12. Cut into strips 1.3 cm [½ inch] wide and 7.5–10 cm [3–4 inches] in length.
13. Bake on ungreased cookie sheet about 10 minutes or until cheese straws are golden brown.

DISCOVERING FOOD TEACHER'S GUIDE
Connie R. Sasse
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Reflection

List kitchen tasks on slips of paper. Draw out slips. Choose what utensil you would use for each task (measuring flour for cake, incorporating air into egg whites). Justify your choice or use reliable resources such as cookbooks or foods texts.

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RECIPE WORKSHEET

Recipes do not always yield the quantity of food we would desire. At times the recipe is designed for a larger group than we intend to serve, while others yield too little. This worksheet is designed to assist you in practicing your math skills so that you can increase or decrease a recipe with ease.

Increasing Recipes

In order to increase a recipe, it is important to determine the working factor. The quantity of each ingredient is then multiplied by the working factor. For instance, when you desire more than the recipe yields, divide the amount desired by the yield. The result is the working factor.

EXAMPLE: The recipe yields 4 and you desire 8 servings

(Yield) 4) 8 (Amount Needed)

2 (Working Factor)

You then multiply all ingredients in the recipe by 2 for the amount desired is twice the amount yielded in the present recipe.

EXAMPLE:

Sweet and Sour Pork for 4		For 8 Servings
1 lb. lean pork	X 2 =	2 lb. lean pork
1 T soy sauce	X 2 =	2 T soy sauce
1 t salt	X 2 =	2 t salt
1 egg	X 2 =	2 eggs
1/4 c flour	X 2 =	1/2 c flour
1/4 c corn starch	X 2 =	1/2 c corn starch

Increase the following recipe. The recipe yields 6 servings and you desire 8.

Onion Soup for 6		For 8 Servings
1/3 c butter	X =	butter
3 c diced onions	X =	diced onions
2 T flour	X =	flour
7 c beef stock	X =	beef stock
1/2 t black pepper	X =	black pepper
6 slices swiss cheese	X =	swiss cheese
4 T grated swiss cheese	X =	grated swiss cheese

Decreasing Recipes

If you desire less than the recipe calls for, only a fraction or portion of the original recipe yield is needed. Therefore, place the amount desired over the amount yielded by the recipe to form a fraction, and reduce the fraction to its lowest terms.

For instance, if the recipe is for 8 and you want to serve 2, place $\frac{2}{8}$ and reduce to $\frac{1}{4}$. You would then multiply the recipe by $\frac{1}{4}$ (working factor).

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EXAMPLE:

Carrot Soup for 8			For 2 Servings
32 oz. chicken broth	X 1/4	=	8 oz. chicken broth
6 carrots sliced	X 1/4	=	1 1/2 carrots sliced
1 c celery root	X 1/4	=	1/4 c celery root
1 onion chopped	X 1/4	=	1/4 onion chopped
4 T butter	X 1/4	=	1 T butter
4 T farina	X 1/4	=	1 T farina
1/2 t white pepper	X 1/4	=	1/8 t white pepper
2 T chopped parsley	X 1/4	=	1/2 T chopped parsley

Decrease the following recipe.

Hot Potato Salad for 12			For 3 Servings
12 medium potatoes	X	=	medium potatoes
4 hard boiled eggs	X	=	hard boiled eggs
8 bacon slices - diced	X	=	bacon slices - diced
1/2 onion	X	=	onion
2 beaten eggs	X	=	beaten egg
1/2 t vinegar	X	=	vinegar
3 1/2 t salt	X	=	salt

KITCHEN MATH CHART

Measure	Equivalent	Metric (ML)
1 tablespoon	3 teaspoons	14.8 milliliters
2 tablespoons	1 ounce	29.6 milliliters
1 jigger	1 1/2 ounces	44.4 milliliters
1/4 cup	4 tablespoons	59.2 milliliters
1/3 cup	5 tablespoons, plus 1 teaspoon	78.9 milliliters
1/2 cup	8 tablespoons	118.4 milliliters
1 cup	16 tablespoons	236.8 milliliters
1 pint	2 cups	473.6 milliliters
1 quart	4 cups	947.2 milliliters
1 liter	4 cups, plus 3 1/3 tablespoons	1,000.0 milliliters
1 ounce (dry)	2 tablespoons	28.35 grams
1 pound	16 ounces	453.59 grams
2.21 pounds	35.3 ounces	1.00 kilogram

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Equipment

HOMEMAKING SKILLS

- Select, use and care for kitchen equipment

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Display small appliances or cooking gadgets that are seldom used or impractical. (Electric hot dogger, egg scrambler.) How often is it used? Is it stuck in the back of some cupboard or closet? Is it a waste of money? Can another appliance or piece of equipment be used in its place?
		Given $1,000 play money, make purchases from displayed pictures of ranges, refrigerators, ovens, small appliances, cookware, cutlery.
	Major and small appliance selection	Use texts, newspapers, store flyers and pamphlets, consumer magazines, catalogs or visit stores to chart brands, features, price, services/warranty and financing available. Major: --range, --microwave oven, --refrigerator, --freezer, --dishwasher Small: --coffeemaker, --food processor, --mixer, --blender, --toaster/toaster oven, --electric can opener, --pressure cooker, --slow cooker, --Wok, --cornpopper, --deep fat fryer, --waffle iron
		Using resources, analyze costs and benefits of each appliance for these situations. --Young newly-married couple, rented apartment, no appliances furnished. They are saving money for a home. --Elderly man, retired, lives alone.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		--Large family, large kitchen and garden, desire a great deal of food storage space. --Working couple, no plans to have children. --Single adult, career person, owns own home.
	Appliance selection	Discuss reasons why you chose the appliances/equipment you did. --Convenience --Status --Economical --Energy conservation --Safety --Aesthetic
	Purchase considerations	What questions would you want to ask yourself when purchasing appliances? Possible questions: --How do I use them? --How do I select and buy them? --How do I care for them? --How does it meet my needs? --Is it safe and efficient? --Do I really need it?
	Factors affecting choices	What factors might affect my decision? --Lifestyle --Availability --Cost --Time --Energy --Durability
	Cookware/ cutlery	Show cookware with different finishes. Ask questions to focus thinking. --Which cookie sheet will produce dark brown cookies? light brown cookies? --Which cake pan should we choose if we want an evenly browned cake? Using resources, describe the properties of metals and finishes used in cookware. Compare the heat distribution of various materials by coating pan with fat and flour for a specific period of time at the same temperature. Determine hot spots, evenness of browning, speed of heating and heat retention. Prepare cookies and bake on a teflon-coated sheet, shiny aluminum sheet and dark tin. Compare results.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Cookware/ cutlery	In small groups, prepare skits. --Zealous pot and pan salesman pushing a $300 set of saucepans. --Television ad for "X" brand cutlery. --Young couple shopping for cookware. --Family of six shopping for cutlery. As a class, develop a minimum list of cookware for camping trip, first apartment, family of six. Consider factors affecting selection for each situation. As a class, brainstorm questions you may want to consider when buying small kitchen equipment. List questions on board. --Type of cooking you like to do? --Money you have to spend? --Number of people in the family? --Can the piece be used in more than one way? --Is the size right for your needs? --Can you continue to use it as your needs change? --Is the piece constructed well? --Is it safe, easy to use and clean? --Do you have storage for it? Will it fit in with what you already have? --Does the cost justify the expenditure in relation to your total needs for meal preparation? In small groups, research different types of cookware and cutlery (pyroceram, coated metals, cast iron skillets, stainless steel, cast aluminum or copper pots and pans). Report to class. Include recommendations regarding usefulness, durability, potential for use, cost, safety, storage. Plan a demonstration comparing it with a similar type of cookware or cutlery. Describe proper care for the cookware you are demonstrating.

PROCESS SKILLS	CONCEPTS	STRATEGIES
PROBLEM	Microwave cookery	In which situations would microwave cookery be best to use? --Large family with seven children preparing evening dinner. --Teenage son is coming home from basketball practice one hour after family has eaten. --Host of party is preparing a delicate meringue pie for dessert. --In the hot summer, a small family wants to keep the kitchen cool. --Single adult wants quick meal. Using resources, including audio visuals, define principles of microwave cooking. Compare energy consumption/microwave vs. conventional preparation. Using resources, identify utensils for microwave cooking. List unsuitable utensils. Using resources, develop a list of microwave cooking techniques. Plan laboratories using different types of foods to teach principles of microwave cooking. Do comparative experiments with conventional cooking methods, noting color, flavor, texture, time, energy and costs.
	Reflection	In small groups, choose one major and one small appliance to research in depth. Interview people who own that appliance and salespersons to find favored brands and features. Present research report to class, including a demonstration of the appliance. Include use and care instructions. Prepare a short abstract for each appliance and include in parent newsletter. Discuss how one may set up a filing system for use and care, warranty, and purchasing documentation. Using the practical reasoning process, make decisions, again, on purchase of appliances/equipment with the $1,000 play money for the situations given. Have your decisions differed from those you made the first time? If so, explain why.

PR

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Kitchen Management

HOMEMAKING SKILLS

- Select materials for the kitchen
- Organize kitchen facilities
- Make maximum use of available space

PROCESS SKILLS	CONCEPTS	STRATEGIES
191. PROBLEM		Select a simple recipe (pizza, cookies, 1 egg cake, etc.) for each kitchen to prepare, using only the amount of time an expert would need to complete task alone. Do not allow preparation or planning time. Write goal and time limit on chalkboard. Prepare pizza in 30 minutes and clean up kitchen for expected guests. After task is completed, list problems faced as you prepared food or meal. Discuss alternative ways you could accomplish task in time allowed, including ways to work together in group and arrangement of kitchen units, and consequences of these techniques. Set goals and list for future reference and evaluation for ways to best work together in kitchen at school and at home to accomplish food preparation tasks. What are the consequences if you do not deal with the problems in planning and working together? During one or more lab situations, take turns observing each other work. As you watch, jot down ways in which tasks could be simplified. As a class, summarize your suggestions and implement them when possible.
GOALS VALUES FACTORS ALTERNATIVES CONSEQUENCES	Factors which contribute to kitchen management	Role play a selected problem you have encountered in working with others (as in a foods lab). Identify factors which contribute to the problem. Using resources, discuss alternative ways of improving the problem. Teacher will arrange two kitchen units efficiently and two units inefficiently for baking pizza. In eight groups, four groups will bake a pizza and each of the other

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Factors which contribute to kitchen management (continued)	four groups will observe, doing a motion study of one group. (Chart for motion study will be provided by the teacher.) While pizza is baking, workers share feelings relating to kitchen management and observers share their motion chart with workers. Total class share findings and observations. Discuss consequences of inefficient kitchen management. Suggest alternative ways of making the laboratory more efficient. How does inefficient management affect you and your class members?
	Methods of improving kitchen management efficiently	Using resources, find principles of kitchen planning and work simplification in food preparation. Select the best tips and include in a parent newsletter. IEE--Analyze management efficiency in your own kitchen. Discuss suggestions for improvement with other family members. Develop and carry out plans for improvement where possible.

PERENNIAL PROBLEM — What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM — What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT — Meal Management/Kitchen Management

HOMEMAKING SKILLS

- Select materials for the kitchen
- Organize kitchen facilities
- Make maximum use of available space

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Show a picture of a kitchen (preferably a kitchen with poor design, work areas, storage space). Study the picture. Would it be easy or difficult to work in this kitchen? Difficult for more than one person? What kinds of things do you look for when you think about how you prepare food in this kitchen? Make a list on board. --Storage areas --Counter space --Traffic patterns --Height of cupboards --Lighting --Ease of cleaning --Refrigerator, sink, dishwasher --Space for small equipment --Clean-up of facility --Number of people working in kitchen
	Management definition Kitchen work areas	List the many management decisions we make when we work in the kitchen. In four small groups, use resources to identify factors which influence efficient and inefficient management in each area. Group 1 a) Kitchen design work area. (Food preparation and storage center, cooking and serving center, clean-up center, other centers if space allows -- mixing, eating, planning, laundry.) b) Work triangle.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Kitchen floor plans	Group 2 Kitchen floor plans. (U-shaped kitchen, L-shaped kitchen, corridor kitchen, peninsula kitchen, island kitchen, one wall kitchen.)
	Time management	Group 3 Time management. (Scheduling a meal, making a time plan, decision-making about time to devote to meal preparation, emergency time planning.)
	Energy management	Group 4 Energy management. (Human energy to devote to meal preparation, non-human energy appliances.)
		Discuss alternative ways to improve kitchen management in each area.
		Describe two family situations. Family 1 - an elderly gentleman living alone. Family 2 - an extended family (mother, father, grandmother, Aunt Pearl and six children.)
		--What factors will influence kitchen management in each of the above situations? (Amount of food to be prepared, resources available for food preparation, persons with food preparation skills.) --Discuss alternatives each family might have for improving management in the kitchen as described in the above situations.
		Discuss consequences of each alternative. Reflect how the alternatives and consequences will affect the individual, family members and society.
	Reflection	Choose a complex food preparation activity to be accomplished in 30 minutes. Allow one day for planning, the next day for preparation. On planning day, assign lab groups one of these four options. 1 - No planning. 2 - Only one member of lab group plans; other members not informed. 3 - Plan together with no leader. 4 - Plan together with leader.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Reflection (continued)	On second day, all groups must stop at end of 30 minutes. Display completed products. Analyze the experience and develop generalizations regarding food management.

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Menu Planning

HOMEMAKING SKILLS

- Identify factors to consider in planning menus
- Plan meals and snacks according to nutritional needs and family preferences

PROCESS SKILLS	CONCEPTS	STRATEGIES
		On chalkboard, write title "Menu Planning...The puzzle is not complete until you can fit all the pieces together!!!" Cut posterboard puzzle pieces. On each piece print a different part of menu planning. --Nutrition --Variety of foods, preparation, color, texture --Management of time and energy --Family likes and dislikes, customs --Money --Space --People being served Select puzzle pieces from basket and put puzzle together. Use the puzzle to discuss why meal planning is like a puzzle and what happens if the puzzle is not put together correctly.
		Use the situational family problem below and plan menus for one day. Beth May sat staring at the blank computer screen, "Cmon-What's wrong with you? How can I figure out what to serve for dinner tonight if you are broken?" The computer figured out everything--easily, simply, quickly. She really depended on it to help her figure out family nutrition. Beth's family is very active and it is important to her that everyone eat right! Since Beth's computer is on the blink, help her figure one of the menus for one day. Family members are as follows.

PROCESS SKILLS	CONCEPTS	STRATEGIES
		--Beth, mother, teaches first grade, likes sports and exercises regularly --Ray, father, landscaper for homes newly constructed --Gary, 16, plays basketball and has practice every evening, never seems to have time to eat breakfast --Sally, 9, constantly on the run--bicycling and playing outdoors --Thelma, 60, Ray's mother, very involved in hospital work, exercises regularly Discuss the following. --What factors affect how the family eats? --How can you plan a meal around family members' eating habits? --What are several alternatives for breakfasts, lunches and dinners for the family? --What are the consequences of each of the alternative meals? --What are the consequences of poor planning for the family? For one day? Long range? --What are the consequences of skipped breakfasts, lunches, dinners? --What are some choices for quick, nutritious breakfasts? --What choices or changes might be made for an elderly person? Young children?
PR		
	Factors which affect the way you eat	What factors affect the way you eat? (List on chalkboard beside puzzle.) --Time/lack of time to prepare --Working parents, no energy left for meal preparation --Money --Busy schedules/activities --Food availability --Influence of friends
	Meal planning considerations	What should we consider when planning meals? --Food likes/dislikes --Money to spend on food --If we want to be healthy--is that important to you? --Time to spend shopping, preparing, eating, cleaning up --Energy to spend preparing foods --Seasonal availability of foods

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Meal planning considerations (continued)	--Activities of family members--calorie needs for their bodies --Who eats the food--ages, health, status
	Advantages/disadvantages of planning meals	What advantages/disadvantages do you see in planning meals? Make a chart on the board.

ADVANTAGES	DISADVANTAGES
1. Buy food at grocery--no return trips to pick up forgotten items	1. Takes too much time to plan everything out
2. Better nutrition for family	2. May not know what you are hungry for when you are planning

Discuss or debate why or why not it is important to plan meals.

	General menu planning factors

Look at food texts, filmstrips and/or pamphlets that give guidelines for menu planning. Examine these sources and share information. Include the following factors.

MEAL APPEAL

INTERNAL FACTORS	EXTERNAL FACTORS
1. Nutrition	1. Age
2. Balance	2. Culture
3. Color	3. Food availability
4. Shape	4. Economics - money
5. Flavor	5. Space - equipment
6. Texture	6. Time scheduling

Develop a checklist to be used when practice planning or when meal planning for foods laboratories or IEE's.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Specific menu planning factors	Develop daily menu plans for achieving your daily food requirements. Consider factors such as: --An energy food at midday is particularly important for the person who is doing heavy physical work. --Away-from-home lunches should be carefully planned for members of the family to provide variety and nutrition. --The dinner meal is often eaten in shifts in busy families. --Snack foods eaten throughout the day.
	Menu writing	Use food texts or other references to seek information on menu form. Write the meals you planned above in menu form. Show examples of your menus and evaluate. See *Planning the Daily Meals. Write a menu for your own family for one day. Be sure to include activities, eating habits, likes and dislikes. Evaluate using checklist developed earlier. Use food pictures, models or boxes. Go through a mock cafeteria line from which you will choose a meal. Take turns acting as cashiers, checking to see that the choices include foods are nutritionally balanced and attractive. Develop plans for a class picnic using the following objectives: spend as little money as possible; use as little energy as possible; pollute the environment as little as possible; and, spend as much time outdoors as possible. Be sure to consider mode of travel, cooking fuel, food spoilage, packaging, campsite set-up and picnic activities. Implement your plans and evaluate their success.

FN 4.25e

A variety of dietary patterns provides food that measures up to good nutrition. Meal plans and food combinations will differ because of: a. individual likes and dislikes; b. age, occupation and habits of family members; c. cost and availability of foods; d. regional, religious and family customs.

1. The main dish for each meal is usually a protein food—meat or meat substitutes for lunch and dinner; cereal and/or eggs for breakfast.

2. Build menus around the protein foods or main dishes. Select complementary foods from the Four Food Groups to see that at least minimum servings from each group are included.

3. Serve foods that are in season. They will be more readily available, best in flavor and more reasonably priced.

4. Contrast color and textures in foods. Provide at least one crisp food at each meal.

5. Stimulate the appetite with flavor differences. Never serve more than one sharp or highly flavored food at each meal.

6. Vary shapes and forms of food at each meal. For example, green peas look better with mashed potatoes than with whole round potatoes.

7. Contrast temperature in foods. Provide at least one hot and one cold food at each meal. Serve hot foods hot; cold foods well chilled.

8. Plan foods that can be prepared within available meal preparation time. Cook vegetables until just crisp for best flavor, nutritive value and appetite appeal. Cook meats according to cut: tender meat cuts by dry heat, less tender cuts by moist heat.

9. Use fresh, frozen and canned foods to vary flavor and texture and enliven meals.

10. Select a grade of food suited to a particular recipe. Use lower grade foods in casseroles where they are not too well identified. Use top grade foods to "show off" their color and form.

MINIMUM RECOMMENDATIONS

MEAL PATTERN	SAMPLE MENU	
Breakfast Fruit or Juice Cereal or Egg Bread Milk	Orange Juice Hot Cereal or Fried Egg Toast Milk	- *Should fulfill at least ¼ of the day's food needs* - *Meat served occasionally*
Lunch Meat or Main Dish Fruit or Vegetable Bread Milk	Ham Sandwich on Whole Wheat Bread (Lettuce and Mayonnaise) Apple (raw) Milk	- *Good time to offer variety uses for certain foods as: Milk in a soup, vegetables or fruit in salad or dessert, meat substitute dishes, peanut butter, etc.*
Dinner Meat or Main Dish Vegetable Bread Dessert Milk	Ground Beef Loaf Mashed Potatoes Gravy Buttered Spinach Hot Rolls Butter Pineapple Slices Milk	- *Can serve one fruit or vegetable as salad - adds texture and offers variety*
"Other foods" to be added as needed	"Other foods" are sugar, seasonings	- *Mayonnaise, butter or margarine, etc.*

PERENNIAL PROBLEM	What To Do Regarding Feeding and Nourishing the Family
PRACTICAL PROBLEM	What Should I Do Regarding Management of Food Resources?
CONCERN/CONCEPT	Meal Management/Menu Planning

HOMEMAKING SKILLS

- Identify factors to consider in planning menus
- Plan meals and snacks according to nutritional needs and family preferences

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Before beginning to work in groups, brainstorm skills for good menu planning and principles of meal management. Write on chalkboard or transparency. Cut out a set of large posterboard or construction paper keys and attach to a ring. Each key represents a principle in meal management.
	Principles of meal preparation	In small groups, hold a business meeting with each group taking a different part. Use resources to find information related to the keys of meal management.
	Planning and managing a meal for a special situation	In small groups, plan menus for three days for the following family situations. Share menus and evaluate. Pose these problems: Let's pretend you have/are: --a new baby in the household. --an emergency situation; flood, blizzard. --to feed a large group of people quickly. --30 teenagers and advisor hiking and camping out for a week. --an illness in family/special diets. --an elderly person living alone. --a low income. Plan daily menus for senior citizens with different needs (a healthy 65-year-old couple who travel a lot; a diabetic man of 70; people with dentures; a 62-year-old man with heart problems; a 65-year-old woman with ulcers). Share your work in class and summarize the ways in which various needs were met.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Planning and managing a meal for a special situation (continued)	Use above situations to analyze how people in various situations can effectively plan meal preparation. Analyze what happens if meals in above situations are not planned. How does this affect the individuals, families or groups involved? What knowledge do you need in order to plan nutritional meals to meet individual and family needs? --Food sources to provide good nutrition (Recommended Dietary Allowances) --Nutritional needs of family members (various ages, activities, lifestyles) --Resources --Internal factors (nutritional balance, color, shape, flavor, texture) --External factors (age, cultures, food availability, money, space, equipment, time) --Procedures --Family situations Share information found concerning meal management. Plan a food laboratory using the situations below. --Low budget meal --Energy-time savings (vegetables in pan, microwave, pressure cooker) --Quick to fix "shelf" meals --Time savers, planning several meals at once and freezing portions In these problems, ask the following. --What is best to do? --What factors play an important part? (Lack of experience in cooking, lack of normal equipment--camping, emergencies--no electricity.) --What alternatives and consequences do you have? --How do you determine which alternative to use? --How can we plan ahead to better meet these unusual needs?
PROBLEM PR	Reflection	Share foods prepared above, discuss your planning and evaluate.

PERENNIAL PROBLEM — What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM — What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT — Meal Management/Food Preparation

HOMEMAKING SKILLS

- Utilize resource recipes and cookbooks
- Utilize a variety of methods
- Demonstrate food preparation skills

PROCESS SKILLS	CONCEPTS	STRATEGIES
205. PROBLEM		Introduce learning experiences. There are many practical problems I have to resolve each time I cook: What ingredients should I use? Should I make substitutions? How should I combine these ingredients? How should I mix these? Should I mix these? I answer these almost automatically...but I have to know the meanings of terms. --What do different terms in recipes mean: "to fold," "to cream," "to saute"? --What are the differences among ingredients? How is soda different from baking powder? Using a recipe with a variety of measurements and cooking terms, provide copies to students divided in laboratory groups. --Examine the recipe. --Underline all words the group members do not know. --Circle all confusing sections of directions. --Is this a recipe you want to make? Why or why not? What information do you need?
	Understanding how to read a recipe	Part of food preparation is knowing how to read and understand a recipe. What makes a recipe easy to read, understand and follow? What items should always be included in a recipe? Develop a checklist for analyzing recipes. Work in small groups. Compare and share. Create a cookbook of your own. The checklist will be included as one of the first pages. Design your own title and table of contents.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Recipe forms	Review ways of writing recipes. --Standard form --Action form --Narrative form --Descriptive form Use resources to find examples of each of these forms. Share with the class. Which would be easiest to use in a laboratory situation? Give reasons to support your opinion.
	Cooking terms, methods, equivalents, measurements, abbreviations	Gather information concerning cooking terms, methods, equivalents, measurements and abbreviations. Include equivalents, substitutions and measurement chart in the beginning of your cookbook. Discuss the following. --Recipe choices for laboratory situation --Recipe choice in relation to one's own resources: skills, time, money and energy --Recipe choice in relation to ingredients--nutritional aspects Practice increasing or decreasing recipes. Use a film, filmstrip, slide presentation, experiments, demonstrations, surveys and/or handouts to introduce the food preparations.
	Snacks	Explore a variety of foods you could select and prepare as snacks which will contribute to your daily nutritional needs (see Module FN 1.21e). Research recipes for good snacks. Compare preparation time, cost, methods, skills and equipment needed plus likes, dislikes and how they are served. Prepare your choices, share and evaluate. Explore the consequences of serving junk food for snacks. How does this affect you, your family and friends? Plan two snacks you could prepare at home with ingredients usually available

PROCESS SKILLS	CONCEPTS	STRATEGIES
		IEE--Prepare snacks for your family or friends at home. FHA/HERO--Prepare snacks for your own meeting, a community day care or nursing home. Add recipes to your personal cookbook of nutritional snacks. Explore the variety of foods which will contribute to your daily nutritional needs. Use these foods to prepare a simple breakfast.
	Breakfast •Fruit or juice •Protein foods •Energy foods •Beverages	Compare preparation time, food value, methods of preparation, skills and equipment and palatability needed of various foods. --Fresh, frozen, canned and dried fruits and juices. --Frying, broiling and microwaving of protein foods. --Review recipes for quick breads and griddle foods. --Research various beverages. --Research table setting, serving and table manners. --Explore and substitute nontraditional foods you could serve. Class members select foods of their choice to prepare three different breakfasts. Share and evaluate. Add menus and recipes to individual cookbooks. Review how breakfast menus used above fill your nutritional needs. Explore the consequences if one part of the breakfast menu is omitted. How does this affect you, your family or group? Plan two breakfast menus you could prepare for yourself or your family from foods usually available in your own home.
	Sack lunch •Protein foods •Energy foods •Fruits and/or vegetables •Beverages	Explore different, interesting and nutritious foods you could prepare for a sack lunch. Each kitchen work group prepare a sack lunch of your choice. Share and evaluate. Add sack lunch menus and any recipes to your personal cookbook. Compare your sack lunch with the cafeteria lunch as to nutrition, cost, appearance, your likes and dislikes. Discuss cafeteria etiquette.

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PROCESS SKILLS	CONCEPTS	STRATEGIES
	Simple lunch •Protein foods •Energy foods •Fruits and/or vegetables •Beverages	Compare preparation time, food value, methods of preparation, skills and equipment needed plus palatability of a variety of foods you could use to serve in a basic, simple lunch pattern. Research recipes, table setting service and table manners. Class select foods and prepare a simple lunch. Share and evaluate. Add menus and recipes to your cookbook. Discuss consequences of serving nutritious lunches. What happens if part of the lunch is omitted? How does this affect you, your family or your laboratory work group?
	Simple dinner •Protein foods •Energy foods •Fruits and/or vegetables •Beverages	Do comparisons, research and preparation of foods suitable for a simple dinner as you did for previous lunch and breakfast. Add menus and recipes to cookbook. Discuss consequences as done in previous section. Analyze how good preparation skills affect nutritional value of foods. How do good preparation skills affect you, your family or group? What are the consequences if you do not have good preparation skills? IEE--Practice food preparation skills by planning and preparing simple meals for the family. Use display case to show foods, nutritional information and completed cookbooks. Make morning nutrition PA announcements.

PERENNIAL PROBLEM What To Do Regarding Feeding and Nourishing the Family

PRACTICAL PROBLEM What Should I Do Regarding Management of Food Resources?

CONCERN/CONCEPT Meal Management/Food Preparation

HOMEMAKING SKILLS

- Utilize resource recipes and cookbooks
- Utilize a variety of methods
- Prepare appetizing, palatable foods
- Identify food preparation principles
- Demonstrate food preparation skills

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Using activities such as flash cards, review basic food preparation terms, utensils, recipe reading and selection, nutrition, meal planning, safety and table setting. Review laboratory planning and time schedules. Develop progress chart for skills to be acquired in food preparation. Post and maintain the chart. Brainstorm types of meals and various types of food preparation done in the home. In groups, identify skills needed for food preparation. Develop progress chart for skills to be acquired in food preparation. Post and maintain the chart.
	Brunch	Define meaning of brunch and when brunch is usually served. Using cookbooks and other resources available in the classroom, discover foods you could serve for brunch. Consider appearance, cost, preparation time, skills and equipment needed, storage, likes and dislikes plus nutritional value. Plan and prepare brunch menus using foods discovered above. Evaluate. Discuss questions similar to those listed below. --Why is brunch a popular meal?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Brunch (continued)	--When is brunch usually served? --What are the consequences if there has not been adequate planning and proper skills are not used? --How does this affect you, your family, friends or class?
	Lunch	Explore various foods you could serve for lunch. In groups, plan and prepare a lunch menu for each of the following. --Single person who comes home for lunch; limited budget, skills and time --Preschool child --Low income parent using food stamps with limited skills and storage --Person who takes a sack lunch who is overweight --Elderly person --Active teenager who plays sports Share and evaluate. Discuss alternative ways daily nutritional needs could be met throughout the day including each lunch situation. List the consequences if menus were not nutritionally balanced, properly prepared or were expensive. How does this affect you, your family or class?
	Buffet	Show pictures of buffet tables. Discuss what buffet means, when you would serve food buffet style and how to arrange serving area. As a class, discuss the following questions. --What should you consider if a buffet were being served to adults, adults and children, adults with 2-3 elderly people or adults with a handicapped person? --What would be the result if you did not consider the needs of everyone? --How would this affect you, the individual people in the group and your family or class? In laboratory groups, plan and prepare sample buffet menus for specific occasions. Consider cost of foods, preparation time, storage, ease of eating, skills needed and nutritional value. Share menus and evaluate laboratory experiences.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Buffet (continued)	Explore foods you can serve buffet style and brainstorm why various foods are good or not good to serve.
	Beverages	Explore various beverages appropriate to be served with specific meals. (Juices, punch, milk, tea, coffee.) Research and demonstrate how specific beverages are prepared. Using resources, consider the cost, skill, equipment, time and nutritive value of the beverages listed above. Complete *Food Preparation Chart for beverages.
	Breads/cereals	Use film, filmstrips, demonstration to research various breads/cereals (yeast or quick breads). Compare recipe foods with mixes or other forms found in today's market (bakery, frozen) as to cost, ease of preparation, appearance, taste. Evaluate. Complete *Food Preparation Chart for breads/cereals. Explore various breads/cereals you could serve with dinner considering cost, skills and equipment, storage, likes and dislikes plus nutritional value. Discuss role of carbohydrates in providing energy. Using various combinations of protein foods, vegetables and/or fruits, decide what bread you would serve. Study and compare the action of leavening agents (yeast, baking soda, baking powder). Do experimental laboratory problems. Observe or prepare quick breads using a variety of flours. Compare the breads for taste, texture and nutrition. FHA/HERO - Plan a field trip to a local bakery. Observe preparation, form of ingredients, cleanliness and safety factors. Note cost of items sold. Demonstrate the kneading process used in baking yeast breads. Why is kneading necessary?

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Breads/cereals (continued)	In laboratory, demonstrate: --Preparing yeast mixture --Sifting of ingredients --Preparing pans for baking --Placement of pans in oven --Timing of procedures --Removal of baked products from pans and cooling procedures Contrast the differences between quick breads and yeast breads in terms of methods of preparation, time to prepare, costs, flavor, texture and leavening agents. Identify the variety of forms in which cereal can be purchased and discuss how this impacts on the cookery procedures. Prepare cereals using the boiling water method and cold water method. Compare them in taste, cost, texture and nutritive value to those cereals which are instant or ready to eat. IEE - Chart and compare nutrients in various cereal products. Discuss the basic principles in cooking cereals. Complete *Food Preparation Chart. Plan and prepare breads and cereals of your choice. Share and evaluate. Using resources, develop principles for baking cookies, cakes and pies. Plan laboratory experiences. In laboratory groups, prepare cupcakes with experimental variations. One group eliminate eggs; another, baking powder, salt, fat. Vary baking times. Evaluate appearance, taste, texture, consistency.
	Fruits/ vegetables	Visit the produce department of a good supermarket. Trace the produce from truck to consumer. Discuss the selection of fruits and vegetables. Identify fruits and vegetables which supply more than 50% of RDA for Vitamins A and C.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Fruits/ vegetables (continued)	Using resources, complete *Food Preparation Chart for fruits and vegetables. Using resource materials, investigate types of fruits and vegetables. Explore how these are prepared, skills and equipment needed, flavors, textures, appearance and nutritive value. Plan and prepare menus for different occasions using a salad in each. Evaluate laboratory experience. Compare different forms of fruits and vegetables. (Fresh, frozen, dried or canned.) Compare homemade, canned and frozen fruits and vegetables for nutritive value, cost, preparation time, skills and equipment needed. Explore various vegetables and/or fruits you could serve in a dinner menu considering cost, availability, skills, equipment, flavor, texture, color and appearance. (See Module FN 1.14) Identify different types of salads. Investigate nutritive value, cost, preparation time and storage requirements. What are the consequences of improper storage and preparation of fruits and vegetables? How would these factors affect you, your family or class? In laboratory groups, create different types of salads and salad dressings. Share and evaluate. FHA/HERO - Work with FFA to start plant seedlings to be sold for vegetable gardens in the community. Compare the costs of buying plants at a greenhouse. Prepare fresh fruit and vegetable garnishes appropriate for a variety of dishes and menus. Select a recipe to cook a vegetable or fruit and then check with a microwave recipe book to contrast the difference in preparation techniques and procedures. Prepare and taste various vegetables and/or fruits with which you are unfamiliar.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Fruits/ vegetables (continued)	Brainstorm different ways that fruits can be cooked. (Baked, broiled, fried, steamed, in liquid.) In laboratory groups, select one fruit and prepare it in as many recipes as you can find. (Apple - apple sauce, baked apple, apple pie, apple juice.) Using instructional resources, develop a cooking information chart for vegetables. Small groups within the class could develop guidelines for cooking canned, frozen, dried, steamed, baked and fried vegetables. In laboratory groups, prepare one vegetable in several different ways. Compare the vegetable in taste, texture, color, odor, time required to prepare and appearance. It may be a good idea to select a vegetable students are unfamiliar with to gain acceptance of a new food. Make snacks using vegetables. Compare the cost as well as nutritive value of the snack. Select an entree and add the vegetables which could be used with this entree to produce an interesting meal. Keep in mind such factors as color, taste, texture, size and shape.
	Dairy products	Milk can be sold in many different forms. Brainstorm all the varieties of milk and discuss the advantages and disadvantages of each form. Discuss the impact of the kind of milk on the characteristics of the finished product. Investigate what types of beverages give the most nutrition for the money. Make a variety of these nutritious beverages. Evaluate and suggest use in menu planning. Compare milk products made from scratch, instant and ready-made. Compare cost, time, additives in the product and quality of the product. Such products could include milkshakes, hot chocolate and ice cream. List the basic characteristics of a cooked milk product and describe the principles and procedures for obtaining a satisfactory cooked milk product. Plan and prepare sauces using milk.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Dairy products (continued)	Research various milk-type desserts. Compare recipe desserts and prepared mixes as to cost, time, skills, appearance and taste. Compare preparation methods such as microwave, cooked or instant. Prepare, share and evaluate. Complete *Food Preparation Chart for milk cookery. Locate food products and recipes which could be substituted in an individual's diet who does not like milk but needs the nutrients from this food group. Create desserts using dairy products as a base. Distinguish between process cheeses and natural cheeses and their proper storage and serving temperatures. Visit a cheese store and taste a variety of cheeses from around the world. Select two or three cheeses and incorporate them into a recipe common for the geographical area the cheese originated. In laboratory groups, make cheese sauces with process and natural cheeses. Observe the factors which influence the behavior of cheese during cookery. Plan and prepare recipes which include cheese. (Omelet, quiche.) Evaluate and plan complete meal for cheese dish. Prepare dips for fruits and vegetables using milk/cheese products. Yogurt and sour cream could be bases of these dips.
	Meats	Find recipes for various cuts of meat. Display quantity of various protein foods (chicken, ground beef, fish, bacon) needed to meet the RDA requirements for protein. Compare cost per serving of various cuts of meat. Do *Food Preparation Chart for meats. Plan a field trip to slaughter house and/or supermarket meat department to observe cuts of meat and procedures for safety and cleanliness.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Meats (continued)	Identify low cost meats and cuts. Demonstrate ways to use less tender cuts of meat. (Pound, grind, marinate, slow cook, braise.) Investigate buying a large cut of meat to cut into portions for several meals versus smaller cuts to serve only one meal. Compare cooked and uncooked servings of hamburger, ground beef, ground chuck and ground round. Discuss how leftovers and inexpensive cuts of meat can be used in soup preparation. Compare varieties of canned soup to each other. Compare canned to homemade soup. Identify various sandwich fillings. How can leftover foods be used? Research recipes for sandwich fillings and investigate proper storage. Compare various breads both homemade and purchased. Explore the various methods for preparing and cooking meat and the cuts appropriate for each cooking method. Prepare and observe the preparation of meats by the following methods. --Dry heat: roast, broil --Moist heat: braise, simmer --Fat: pan fry, deep fry Discuss the different degrees of doneness of meats and investigate the temperature as well as the color for the various degrees. Select a cut of meat and experiment with different cooking methods to see the effects of variation in the method on the quality of meat. IEE - Prepare meats with which you might be unfamiliar. Taste and evaluate. FHA/HERO - Develop a presentation on meat cuts, recipes and preparation. Give the presentation at a local mall on a weekend or evening.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Meats (continued)	Prepare meat "substitutes" which contain high amounts of soy bean but are prepared to look and taste like meat. Evaluate these "substitutes" in terms of cost, nutrient value, flavor, texture, odor, after-taste and appropriate uses. Select a recipe and prepare a casserole, soup or sandwich using meat or seafood. Taste and evaluate.
	Eggs	Identify parts of an egg, grades and sizes of eggs, nutritive value and storage needs. Identify the various methods for preparing eggs and discuss the characteristics of a properly cooked egg. Observe a demonstration or prepare eggs from the methods listed below. --Baking --Scrambling --Frying --Microwaving --Poaching --Boiling Explore the various functions eggs perform in recipes. Discuss their preparation in these various forms (emulsify, leaven, thicken, bind or coat). Complete *Food Preparation Chart for eggs.
	Fish	Visit a fish market. Compare the different types of fish and seafood available to today's consumers and investigate the methods for cooking the fish. Be aware of the costs involved, time to prepare, availability, flavor and texture and nutritive value. Prepare fish in the following ways. Complete *Food Preparation Chart for fish. --Broiled --Fried --Baked --Poached Evaluate and compare the different methods.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Poultry	Discuss the similarities between the cooking of poultry and meat. Identify the types of poultry and the recommended method of cooking. Describe the procedure for cleaning, disjointing and cooking of poultry. Describe the methods for determining the doneness of the poultry. Plan and prepare poultry in the following ways. Complete *Food Preparation Chart for poultry. --Dry heat: roasting, broiling, frying --Moist heat: braised, simmering, stewing Evaluate poultry products for appearance, texture, flavor and palatability.
	Dinner	Plan and prepare dinner menus utilizing principles learned in food preparation. Vary menus (cost, complexity, time required, seasonal/holiday, use of different appliances).
	Creative foods	Explore various foods you could prepare creatively (casseroles, desserts, low cost, low calorie and specific diet). Read *Creating Your Own Casserole. Plan laboratory based on the information given. Research some basic recipes and the component parts of casseroles and desserts. Discuss ways these could be changed to meet likes, dislikes, diet needs and cost. (Refer to Module FN 1.22) Given a list of leftovers, plan innovative uses. Research cookbooks to find information on creative cooking. Using resources, research a spice or herb and share with class. Determine how this spice or herb can be used to enhance foods. Plan a laboratory experimenting with spices and herbs.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Creative foods (continued)	IEE - Grow and preserve your own herbs. IEE - Develop a recipe on your own. Prepare the recipe at home. Share family's evaluation of recipe with class. FHA/HERO - Enter newly developed creative recipes in a cooking contest.
	Outdoor cookery	Brainstorm foods you like to prepare outdoors. Share why these are favorites. List occasions when you enjoy outdoor cookery (eating on patio, deck, back yard; picnic away from home, camping, backpacking). Using resources, investigate how to properly cook food outdoors. Discuss factors involved in outdoor cookery (equipment needed, skills, safety, spoilage, cost - low income). Investigate pre-prepared foods which are available for outdoor cookery. Consider foods you would want to take on a picnic and describe precautions that would be necessary for their proper storage. Find foods and snacks appropriate for backpacking, skiing, camping and plan a balanced menu around these foods. Plan and prepare a complete outdoor cookery meal dividing foods among laboratory groups. IEE - Plan and prepare foods to be served and/or cooked outdoors. Evaluate. Plan and evaluate menus for the following. --Young child's birthday party in summer. --Snack for cross-country skiers. --Lunch for a group of people on a canoe.

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PROCESS SKILLS	CONCEPTS	STRATEGIES
	Ethnic/foreign foods	Plan a meal using foods from your own ethnic background. In small groups, research ethnic or foreign foods you can prepare in laboratory considering availability of ingredients, cost, skills, equipment and nutritive value. Investigate foods of other countries. (Refer to Module FN 3.22) Invite persons native to the chosen country to share the foods of their country and prepare some of these to share with class. FHA/HERO - Invite foreign language teacher, if countries correspond, to give an overview of the country, it's people and food. Share pictures, slides, films or articles of the country. FHA/HERO - With foreign language club, visit an ethnic restaurant serving food of your chosen country. Plan and prepare a meal appropriate for the selected country. Divide food to be prepared among laboratory groups. Serve and taste each food served. Evaluate.
	Entertaining	Explore various foods you could prepare and serve for different types of entertainment. Consider appearance, cost, preparation time, skills, equipment, storage, likes and dislikes and nutritional value. Research recipes which could be used when entertaining guests. Investigate table setting and service. Choose foods appropriate for three different types of parties (birthday party for child, wedding shower, after game party for friends, FHA/HERO party). Prepare these foods. Share and evaluate. IEE - Plan and prepare foods to be served for a party you or your family is giving. FHA/HERO - Plan and prepare foods for a group of your choice.

PROCESS SKILLS	CONCEPTS	STRATEGIES
	Food Experimentation	To relate nutrition to meal and food preparation, perform tests for the following. (See *Investigating Foods.) --Starch --Protein --Fat --Sugar --Water --Vitamin C --Minerals
	•Drying	Serve a variety of dried fruits and vegetables. Identify other foods which contain a lot of water naturally and are often preserved by drying or evaporation. Discuss the equipment and techniques used in drying foods. Examine the cost, time and energy used in drying foods. Dry two vegetables and two fruits in the foods laboratory. See *Investigating Foods.
	•Vitamin C	Select a juice, such as orange juice (fresh, frozen, canned), and test it for Vitamin C. See *Investigating Foods. Distinguish the difference between fruit juice and fruit drinks for content such as water, percentage of fruit juice and sugar content. Discuss storage techniques for fruit, especially for preventing the loss of Vitamin C.
	•Thickening agents	Identify foods which have a high amount of starch and are used to thicken soups, stews and gravies. Name several thickening agents and contrast how they differ. Examine several recipes which would need a thickening agent and identify the specific thickening agent you should use. Compare puddings for consistency, smoothness, flavor, minutes to prepare and cost. The puddings would include mix-cooked, mix-instant and made from scratch. What thickening was used in each pudding?

PROCESS SKILLS	CONCEPTS	STRATEGIES
		Test several foods for their starch content. Discuss the impact of a high starch diet on the body. See *Investigating Foods.
	•Protein	Burn foods to test for protein content. See *Investigating Foods.
	•Fats	Discuss the functions of fats in food preparation.
		Identify foods which are naturally high in fats as compared to those prepared in fat.
		Test a variety of foods for their fat content. See *Investigating Foods.
	•Sweeteners	Discuss the role sweeteners play in our diet as well as their impact on our body.
		Identify foods which naturally contain a sweetener as contrasted from those which have a sweetener added.
		Conduct a test for sweeteners in a food. See *Investigating Foods.
		Do food experiments by selecting a recipe and each laboratory group varying something in the recipe. Evaluate and compare the results showing how product is changed. Using resources, analyze results. List common food failures and scientific principles for these failures.
	Reflection	Complete a progress chart to account for skills developed in food preparation module.

FOOD PREPARATION CHART

FN 4.26

FOOD AREA	PRODUCTS	INFORMATION	NUTRITION	COOKERY PRINCIPLES	STUDENT SKILLS	SHOPPING PRACTICES	STORAGE	EVALUATION FACTORS

EXAMPLE

FOOD PREPARATION CHART

FN 4.26

FOOD AREA	PRODUCTS	INFORMATION	NUTRITION	COOKERY PRINCIPLES	STUDENT SKILLS	SHOPPING PRACTICES	STORAGE	EVALUATION FACTORS
Eggs	Baked eggs Omelets Quiche Souffle Poached eggs Fried eggs Scrambled eggs Microwave eggs Soft and hard cooked eggs	- Shell color - Parts of the egg - New terms - Egg production - Function in cookery (Add More)	Protein Vitamins except V.T.C. (Add More)	Baking Frying Poaching Scrambling Microwaving } Give specific directions. See below. ↓ EXAMPLE SCRAMBLING EGGS 1. Prepare pan 2. Top of range cookery 3. Degree of mixing for desired product consistency 4. Additions (milk, cream, seasoning etc.) 5. Low temperature cookery 6. Correct stirring for good consistency and tenderness 7. Stirring to retain warmth and consistency	How to break an egg without breaking yolk How to cook without toughening protein or discoloring yolk	Grades Sizes Pricing	Stored in carton Refrigerated Shelf life Storage of yolks albumen	What to look for in a properly cooked egg

FN 4.26

CREATING YOUR OWN CASSEROLE

COMBINE 2 cups cooked meat such as:
Browned ground beef, cooked chicken, leftover cooked beef or pork, tuna, etc.

+

WITH Starchy extender such as:
7 oz. noodles or macaroni, cooked
½ to 1 cup rice, cooked

+

AND A Sauce such as:
1 can cream of celery, mushroom or chicken soup diluted with ¼ cup water or milk

OR

1 can tomato soup

OR

1 can tomato sauce

OR

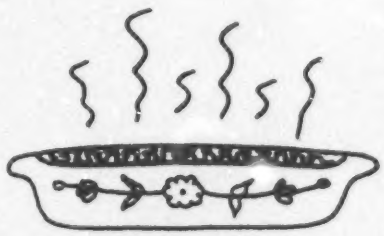
1½ cups white sauce:
2 t. flour
2 T. margarine
1½ cups milk

+

ADD Vegetables, such as:
Cooked peas, carrots

+

USE Seasoning ingredients such as:
Green pepper
Onion
Mushrooms
Chopped celery
Bouillon cubes
Salt and pepper



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ADD Topping such as:
Buttered crumbs or cubes
Crumbled potato chip crumbs
Grated cheese

Source: Ohio Family Life Education Guide.

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INVESTIGATING FOODS

DIRECTIONS

Test for Starch:

1. Mix ¼ teaspoon cornstarch with ½ teaspoon water.
2. Add a few drops of iodine to the cornstarch solution.
3. A purple color will develop. (This purple color is a positive indication that starch is present.)

Try the test with other foods. Add drops of the iodine solution to foods to test for starch. Some foods that contain starch are potatoes, bread and macaroni. Some foods that do not contain starch are meat, cheese and apples.

Test for Protein:

Smell burning feather. The odor of burning protein is distinctive. (This odor is a positive indication that protein is present.) Burn various foods on a piece of aluminum foil placed on a hot plate to determine those that contain protein. Some foods that contain protein are egg whites, meat, cheese and dry beans. Some foods that do not test positive for protein are tomatoes, oranges and celery. The meat tested must be raw.

Test for Fat:

Rub some fat on wrapping paper. (The grease spot is a positive indication that fat is present.) Try this test with other foods, labeling each spot. Allow paper to dry. Examine spots by holding paper to light.

Test for Sugar:

1. Put corn syrup in a test tube (to ¼ inch deep).
2. Add water (to 3/4 inch deep).
3. To this mixture of corn syrup and water, add 30 drops of water.
4. Add 10 drops of Benedict solution.
5. Heat, wait for blue color to change to red-orange. (This red-orange color is a positive indication that sugar is present.)

Try the test with other foods. Put a small piece of food in a test tube, add 30 drops of water and 10 drops of Benedict's solution, boil gently 1-3 minutes. Label test tubes with names of foods tested. Some foods that contain sugar are oranges, cookies and ripe bananas. Some foods that do not contain sugar are meat, cheese and nuts.

Test for Water:

1. Weigh foods, such as bread, vegetables, fruits, crackers using a gram scale. Record weights.
2. Place foods in oven, set at 250 degrees, for predetermined length of time (10-15 minutes). If oven is not available, place foods on radiator or in sun.
3. Weigh foods, using gram scale, and record weights.
4. Determine weight loss by subtracting second weight from the first.
5. Any weight loss represents evaporation of water from the food.
6. If time is available, continue drying foods until weight loss ceases. A large weight loss indicates the presence of a large amount of water in the food; a small weight loss indicates a small moisture content in the food.

Test for Vitamin C:

Preparation of indicator solution:

1. Gradually add 1 cup water to 1 tablespoon cornstarch. Bring mixture to a boil and cook over low heat for 20 minutes. Cool.
2. Into ½ cup water, add 1 teaspoon starch mixture and 3 drops of tincture of iodine. Stir.

To conduct tests:

For each juice tested, measure 4 ml. (approximately 2 inches) of indicator solution into a 10 ml. test tube. Begin adding drops of fruit juice to the indicator solution. Shake test tube after each addition of juice. It will take fewer drops of juices high in Vitamin C to change the indicator from blue to clear. Foods low in Vitamin C require more drops to make the color change.

List of sample results changing indicator solution from blue to clear is as follows.

5 drops fresh orange juice
7 drops fresh lemon juice
10 drops fresh lime juice
12 drops Libby's canned apricot nectar with citric acid added
15 drops Libby's canned grapefruit juice
50 drops Mott's apple juice

NOTE: Be sure to use fresh juices or freshly opened canned juices because Vitamin C is lost on standing. Also note what additives are in canned juices, as this may affect the results.

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INVESTIGATING FOODS

EQUIPMENT AND SUPPLIES

	Equipment	Foods and Chemicals
Test for Starch:	1. Measuring spoons 2. Small paper cup 3. Paper towels 4. Eye dropper	1. Cornstarch 2. Iodine 3. Water 4. Foods: Potato, Bread, Macaroni, Hamburger, Cheese, Apple
Test for Sugar:	1. Test tubes (7) 2. Test tube rack 3. Test tube holders (2) 4. Sterno 5. Matches 6. Asbestos pad 7. Medicine droppers (2) 8. Grease pencil for labeling test tubes 9. Tongs	1. Benedict's solution 2. Water in large container 3. Foods: Corn syrup, Cookie, Hamburger, Nut, Orange, Ripe banana, Cheese
Test for Protein:	1. Sterno 2. Wire mesh stands 3. Aluminum foil (7 small pieces) 4. Matches 5. Feather 6. Asbestos pad 7. Tongs	1. Foods: Hamburger, Cheese, Tomato, Celery, Beans, Egg, Orange
Test for Fat:	1. Brown paper 2. Magic marker	1. Foods: Orange, Cheese (natural), Carrot, Nut, Hamburger, Tomato
Test for Minerals:	1. Wire mesh stand 2. Aluminum foil (small squares) 3. Sterno 4. Spoon 5. Asbestos pad 6. Matches	1. Foods: Carrot, Hamburger, Cheese, Bread

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	Equipment	Foods and Chemicals
Test for Water:	1. Aluminum foil 2. Gram scale 3. Oven (or other heat source)	1. Foods: Bread Carrot Cracker Instant Potatoes
Test for Vitamin C:	1. Measuring spoons 2. Measuring cup 3. Small paper or glass cups (8) 4. Eye dropper	1. Cornstarch 2. Water 3. Iodine 4. Foods: Orange juice (fresh) Grapefruit juice (fresh) Lemon juice (fresh) Apple juice Pineapple juice